



Canadian Environmental
Assessment Agency

Agence canadienne
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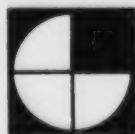
REVIEW OF THE CANADIAN ENVIRONMENTAL ASSESSMENT ACT

Background Study

OPTIONS AND TOOLS FOR IMPROVING FOLLOW-UP

Canada





**Gartner
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Options and Tools for Improving Follow-Up: A Discussion Paper

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Canadian Environmental Assessment Agency

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Executive Summary

The Canadian Environmental Assessment Agency (the Agency) identified the need to ensure that the way in which "follow-up" activities are developed and implemented by federal agencies and project proponents is efficient and effective. Follow-up is defined in the *Canadian Environmental Assessment Act* (Act) as a program for:

- a) verifying the accuracy of the EA of a project; and
- b) determining the effectiveness of any measures taken to mitigate the adverse environmental effects of the project.

A 'Follow-up Subcommittee' of the Senior Management Committee on Environmental Assessment composed of members of 14 various federal departments was established and co-ordinated by the Agency. The Subcommittee has complete a discussion paper which summarizes the requirements for conducting follow-up in the context of the Act and explains the role of follow-up in the Environmental Assessment process.

The discussion paper presents an overview of the current problems or issues related to the implementation of follow-up in environmental assessment by federal departments and identifies the potential options and/or tools that could be used to improve the manner in which federal authorities fulfill their roles and responsibilities regarding follow-up. Twenty options/tools were identified and evaluated using criteria that are based on the Government of Canada Regulatory Affairs guide on requirements for developing regulatory policy, and on assessing regulatory alternatives. The evaluation resulted in the identification of fourteen options/tools which had the greatest potential for improving the manner in which follow-up is conducted. Based on this evaluation, the Follow-up Subcommittee developed a set of recommended actions and a preliminary action plan for improving follow-up under the Act.

The preliminary action plan emphasizes that an overall consistent approach to follow-up needs to be developed by the Canadian Environmental Assessment Agency in consultation with all relevant federal authorities in the form of an Operational Policy and Follow-up Guide. Within this framework, individual federal departments would develop or revise their own follow-up related guidelines, guides and tools (as required) to improve practices and procedures and conduct compliance monitoring for their own follow-up activities using a customized 'compliance monitoring framework' developed by the Agency. The Agency would assist federal departments by playing a co-ordination role and by providing advice and guidance. Training and communications programs would be designed and delivered by the Agency and individual federal departments regarding their own initiatives (i.e., policies, guides, etc.). The Follow-up Subcommittee also envisaged that some of the guides developed by the Agency or individual federal departments could evolve into more formal standards or codes of practice in the future.

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Options and Tools for Improving Follow-Up: A Discussion Paper

1. Background

"The Government of Canada firmly believes that our economic health depends on our environmental health. We firmly believe that the Federal government can help shape a better future for all Canadians, a future characterized by sustainable development."
(Government of Canada, 1995)

The environment is an important local, national and global issue at the close of this millennium, and the start of the next. As such, governments and industry need to develop environmental policies and practices to deal with the relevant issues.

Issues of ozone depletion, global warming, acid rain, endangered species and water quality are examples of concern that require long term, sustained management. Decisions taken today will influence the quality of our environment and quality of life well into the future.

Environmental assessment (EA) is a tool used by government and the private sector to help ensure that the potential environmental effects of planned projects receive careful consideration before decisions are taken in connection with them. Follow-up, within the context of environmental assessment, is defined in the Canadian Environmental Assessment Act as a program for:

- verifying the accuracy of the EA of a project; and
- determining the effectiveness of any measures taken to mitigate the adverse environmental effects of the project.

Given the important role that follow-up activities have in ensuring environmental protection and sustainable development, the large public profile held by panel reviews, the significant investment in EAs provided by project proponents, and the significant resources devoted by RAs in carrying out their responsibilities; the Canadian Environmental Assessment Agency (the Agency) identified the need to ensure that the way in which follow-up activities are developed and implemented by federal agencies and project proponents is efficient and effective.

The need to examine and improve the manner in which follow-up is undertaken under the Act was later confirmed by the Commissioner of the Environment and Sustainable Development as part of the 1998 Auditor General's report. In the audit report, the Commissioner confirmed some of the deficiencies previously identified by the Agency through its consultation and research. Both the Agency and Commissioner have concluded that the follow-up component of environmental assessment needs to be strengthened.

In response, the Agency has been undertaking numerous consultation activities with EA practitioners across Canada, is studying the benefits of the Act and is planning to undertake further consultation with other stakeholders on the issue of follow-up.

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2. Purpose of this Discussion Paper

To assist the Agency in its efforts to improve the way in which follow-up activities are developed and implemented by federal agencies and project proponents, a "Follow-up Subcommittee" (see Appendix A) of the Senior Management Committee on Environmental Assessment (SMCEA) was created in February 1998. The Subcommittee, chaired by the Agency, was charged with the following tasks:

- identifying, assessing and confirming follow-up problems at both the departmental level (i.e., agency, responsible authority), and the project level;
- developing and analyzing options to address follow-up problems, including both regulatory and non-regulatory options; and
- reporting its findings to the Senior Management Committee on Environmental Assessment (SMCEA).

To this end, this "Discussion Paper" summarizes the requirements for conducting follow-up in the context of the Canadian Environmental Assessment Act and explains its role in the Environmental Assessment process. This paper presents an overview of the current problems or issue related to the implementation of follow-up in environmental assessment by federal departments. The "root causes" of these problems/issues are identified. Based on consultation and research conducted by the Agency and the Follow-up Subcommittee, this discussion paper also identifies and describes the potential options and/or tools that could be used to improve the manner in which federal authorities fulfill their roles and responsibilities under CEAA regarding follow-up. It illustrates effective follow-up practices through the use of case examples from a variety of federal departments and other jurisdictions. The discussion paper also provides an evaluation of the identified options/tools to assist the SMCEA in determining which options/tools offer the greatest potential for resolving the identified problems/issues.

The process being used by the Follow-up Subcommittee to identify and analyze options is based on the Government of Canada Regulatory Affairs guides on requirements for developing regulatory policy, and on assessing regulatory alternatives. To this end, this discussion paper will facilitate decision-making by the SMCEA by recommending a set of options/tools that will result in the most substantial improvement to follow-up. Some of these options/tools may need to be investigated further in the context of the Five Year Review of the Canadian Environmental Assessment Act through broader consultation and research. To this end, this discussion paper provides a preliminary action plan. In addition to the SMCEA, this discussion paper may also be of interest to staff at federal departments involved in EA, project proponents and the public.

3. Follow-up in the Context of the CEAA

The term "follow-up" is defined in the Canadian Environmental Assessment Act as a program for:

- verifying the accuracy of the EA of a project; and
- determining the effectiveness of any measures taken to mitigate the adverse environmental effects of the project.

Comprehensive studies shall include a consideration of the need for, and the requirements of, any follow-up program for a project. In the case of a screening, Responsible Authorities have discretion in the consideration of a follow-up program. If it is decided that a follow-up program is required, the Responsible Authority shall design a follow-up program which is considered to be appropriate, and arrange for its implementation.

In the case of a panel review, the panel prepares a report which may include recommendations regarding a follow-up program. The RA in co-operation with the other Federal authorities, responds to the recommendations of the panel, designs and arranges for the implementation of a follow-up program, as appropriate. The public is to be advised of any follow-up program that is designed or approved, and any results of the program. A public registry that is to be developed by each Responsible Authority is to contain all records with respect to the environmental assessment of the project, including any records produced as the results of the implementation of follow-up activities.

With respect to regulations, the Governor in Council has the authority to make regulations in several areas, including the procedures, requirements of and time periods relating to the environmental assessment process and follow-up programs. The relevant sections of the CEAA pertaining to follow-up are described in Appendix B.

4. Follow-Up in the Context of Environmental Assessment

A follow-up program must be considered as an integral part of the EA process from earliest project design and planning stages and continuing throughout all phases of the project cycle, including the decommissioning/abandonment phase. By providing information about the current status of the project within its environmental setting, a follow-up program provides information feedback to ensure that environmental impact predictions are verified and that any mitigation measures recommended are implemented and effective. This feedback is essential to ensure that those who plan development and

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those who manage environmental resources are supplied the information upon which to base their investment and regulatory decisions. This is critical if we are to learn from one project to another, and improve the efficiency and effectiveness of the EA process. In this context, the broader objectives of follow-up can be considered to be:

- to improve the environmental assessment of future projects;
- to avoid or minimize adverse effects on the environment; and
- to build confidence among the general public that environmental protection measures will be implemented and that they are effective.

The role of follow-up in the context of an EA can be seen by examining the various information feedback loops shown in Figure 1.

Scoping in the early project planning and design stages helps define the key project related issues and the baseline information requirements, which in turn provides information to allow for the assessment of potential environmental effects and the recommendation of mitigation measures. The resultant EA document (i.e., Screening Report, Comprehensive Study, etc.) are reviewed and used as the basis for detailed project design by the proponent, and permitting/licensing by regulators. These activities should provide two critical inputs to a follow-up program:

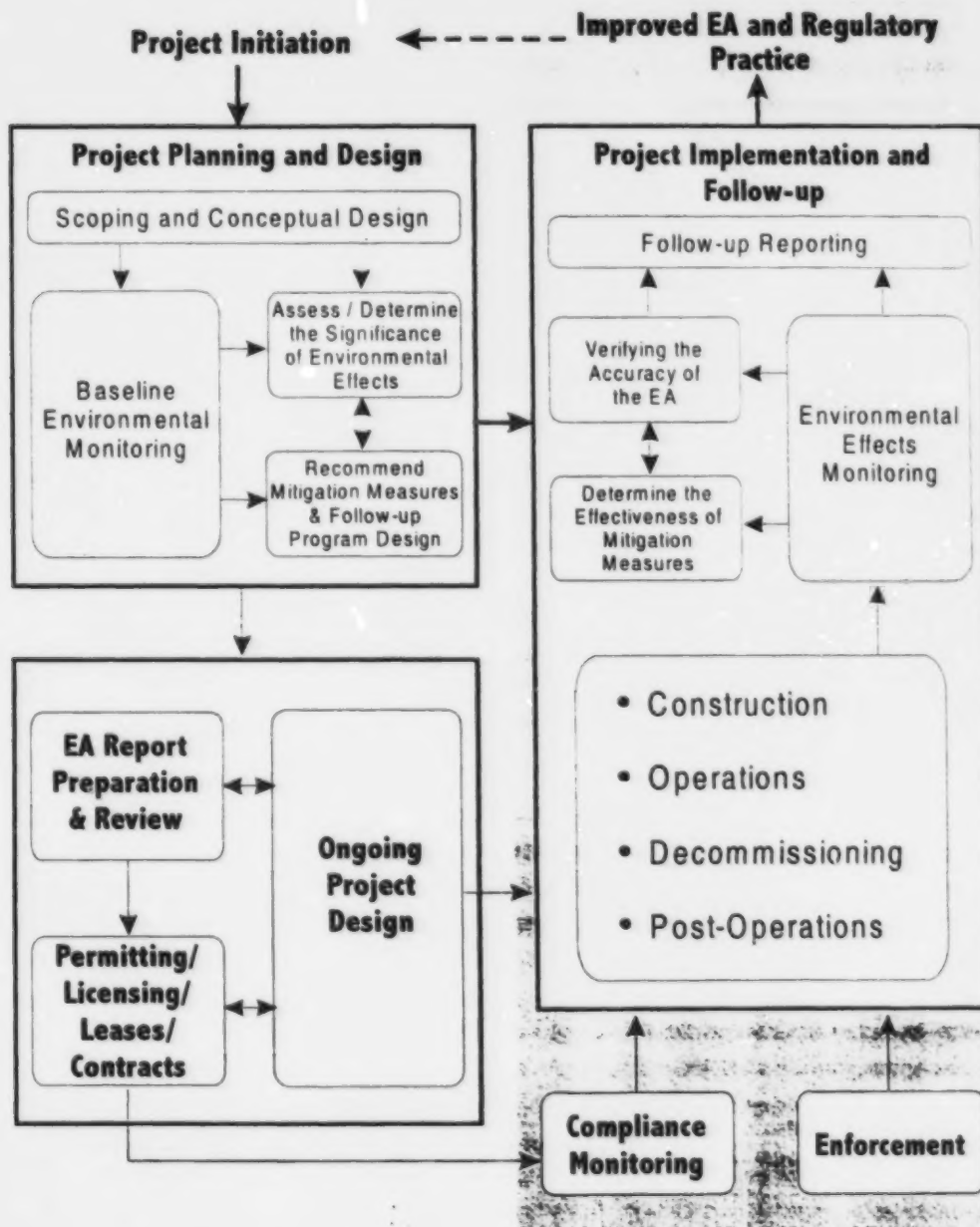
1. a clear statement of the predicted environmental effects as outlined in the EA document; and
2. a clear statement(s) of the commitments to mitigation as recommended in the EA document.

The approved project design, including the recommended mitigation measures specified in the EA document are implemented by a proponent. The project may or may not lead to actual environmental effects. Regardless, monitoring provides information on the actual effects which can be used by project proponents and regulators in modifying the way the project proceeds through its construction, operations and decommissioning/abandonment phases within the context of existing approval. Monitoring information may also be used by regulators as an "early warning" signal for potential problems. Monitoring must be based on a sound characterization of the existing baseline environmental conditions and should be repetitive and systematic, because adjustments to projects and changes in the environment can lead to new environmental effects. These activities provide the most critical input to a follow-up program:

3. the identification and description of actual environmental effects.

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Figure 1. Follow-Up in the Context of Environmental Assessment



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Taken together, these activities provide the necessary information to ensure that environmental impact predictions are verified and that any mitigation measures recommended are implemented and effective. Therefore, environmental effects monitoring, the approved EA document and any subsequent commitments to mitigation are essential components of a follow-up program.

- **Environmental Effects Monitoring (EEM)** is the repetitive and systematic measurement of the characteristics of environmental components to test specific hypotheses of the effects of a project on the environment. EEM is undertaken by the proponent primarily to determine the effects of a project, and secondarily to increase the understanding of cause-effect relationships between the project and environmental change.

As described above and illustrated in Figure 1, a follow-up program *is supported by* other programs or activities: baseline monitoring, compliance monitoring, permitting/licensing and enforcement.

- **Baseline Monitoring** involves data collection and/or the repetitive and systematic measurement of the existing characteristics of environmental components to assist in the prediction, assessment and monitoring of environmental effects.
- **Compliance Monitoring** involves the verification through inspection by a regulatory body or mandatory reporting by the proponent that the project is being carried out as designed and in accordance with regulations, Ministerial orders, permits, licenses and authorizations. Compliance monitoring also ensures that all commitments made in an EA are being fulfilled. Compliance monitoring may require 'operational monitoring' on the part of a proponent. This involves sampling or ongoing monitoring of releases into the environment, modifications to the project design or changes in operational conditions to confirm any cause-effect relationship between the project and environmental change.
- **Permitting and licensing/leases and contracts** primarily involve defining the terms and conditions for project approvals by regulators and/or establishing lease agreements/contract. It also involves the provision of specialist advice from a regulator to a project proponent during the planning and design phase and the EA review in an effort to gain agreement regarding appropriate study and project design, mitigation recommendations and the design of a follow-up program (if necessary).

Once follow-up activities are undertaken, the information can be used to initiate enforcement actions, changes to Terms and Conditions or to the project itself (where possible). Follow-up provisions contained in authorizations, permits, licenses, etc., can also be enforced.

- **Enforcement** involves the application of sanctions (e.g., operating restrictions, fines, etc.) for non-compliance with regulations, Ministerial orders, permits, licenses and authorizations. Enforcement actions are taken on the basis of information from both compliance monitoring and follow-up activities.

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In addition, information from follow-up can be captured and shared to improve the effectiveness of EA procedures, increase predictive capacity and improve monitoring programs for future projects.

5. Issues

5.1 Background

In order to improve the manner in which follow-up is undertaken in the context of environmental assessment and in accordance with the CEAA, a sound understanding is required of the problems or key issues that relate to effective implementation of the follow-up provisions in the Act. As the first step in gaining a better understanding of the problems or key issues, the Agency undertook a program of consultation and independent research.

To identify problems or issues at the departmental and project levels, the Agency created a subcommittee of the Senior Management Committee on Environmental Assessment in February 1998 (referred to as the Follow-up Subcommittee). The Follow-up Subcommittee is comprised of representatives from 14 federal departments who provided advice and guidance regarding the Agency's activities and shared experiences with the Agency and other federal departments. The subcommittee met ten times between February 1998 and March 1999. The Agency also conducted consultative sessions with members of Regional Environmental Assessment Committees (REAC) across Canada on issue identification. Eight consultative sessions were held with REACs in Vancouver, Edmonton, Regina, Winnipeg, Toronto, Quebec, Dartmouth and St. John's.

In addition to these consultation activities, the Agency also conducted a literature review and commissioned a 'desk-top' analysis of the follow-up components of selected panels and comprehensive studies (Gartner Lee Limited, 1998a). The literature review resulted in the development of an annotated bibliography related to follow-up and monitoring issues. The desk-top study reviewed the follow-up components of nine (9) Comprehensive studies; four (4) Environmental Assessment and Review Process Panel Reviews, and two (2) Canadian Environmental Act Panel Reviews. The 'desk-top' study helped to:

- determine how requirements for follow-up activities evolved through the review process under the Canadian Environmental Assessment Act and selected EARP reviews;
- identify follow-up activities that have been required by Responsible Authorities/ federal authorities under the current Act and selected EARP reviews; and
- identify opportunities/barriers to efficient and effective implementation of follow-up activities by Responsible Authorities and project proponents.

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5.2 Issues Identified

The following sections discuss the issues identified by the Canadian Environmental Assessment Agency, the Follow-up Subcommittee and the desk-top review. These issues are structured according to three themes identified by the Follow-up Subcommittee:

1. Management, Roles and Responsibilities
2. Content of Follow-up Programs
3. Permitting and Enforcement

Section 5.2.3 summarizes these problems/issues by highlighting their root causes and contributing factors.

5.2.1 Management, Roles and Responsibilities

Issue: *There are various interpretations of what is required under Section 38 of the Act.*

There are currently no follow-up related regulations and there exists some ambiguity in wording of the Act regarding follow-up. Consequently, there exists some confusion among federal authorities as to the role of an RA in the absence of follow-up related regulations. According the Section 38 of the Act, where a RA takes a course of action pursuant to paragraph 20(1)(a) or 37(1)(a), it shall, *in accordance with any regulations made for that purpose*, design any follow-up program that it considers appropriate for the project and arrange for the implementation of that program. In addition, an RA shall, in accordance with any regulations made for that purpose, advise the public of:

1. its course of action in relation to the project;
2. any mitigation measures to be implemented for the adverse environmental effects of the project;
3. the extent to which the recommendations set out in any report submitted by a mediator or a review panel have been adopted and the reasons for not having adopted any of those recommendations;
4. any follow-up program designed for the project; and
5. any results of any follow-up program.

Consultation conducted by the Agency indicates that some federal authorities view this section as only coming into force when a regulation is in place, and therefore, are not designing or implementing follow-up.

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Issue: *Co-ordination of follow-up activities among federal authorities is often inadequate.*

Given that an RA is obligated to ensure a follow-up program is designed and implemented when it is considered appropriate for the project, there remains uncertainty over the roles and responsibilities of other federal authorities for both designing and implementing the program, and the limits to the discretion afforded to the RA. This issue relates to both how an RA considers the specialist advice from other federal authorities and recommendations from federal Panels and mediations.

There are no regulatory mechanisms and few non-regulatory mechanisms available to an RA to facilitate the co-ordination of follow-up related activities among federal departments, or to encourage consensus or agreement building among federal jurisdictions. Financial and human resources constraints, different organizational structures of federal departments and a lack of formal procedures, guidelines or other mechanisms have constrained co-ordination efforts. Although long term experience is lacking, consultation with EA practitioners indicates that the Regulations Respecting the Co-ordination by Federal Authorities of Environmental Assessment Procedures and Requirements (i.e., Federal Co-ordination Regulations), provide little guidance. The regulations stipulate that the Responsible Authorities shall, *after consulting with all federal authorities* that respond to an initial notification, together determine the scope of the project, the factors to be considered under Section 16 of the Act and the scope of the factors to be considered. This would involve jointly determining "the need for, and the requirements of, any follow-up program in respect of the project" (discretionary for screenings and mandatory for comprehensive studies).

Issue: *Co-ordination of follow-up activities for multi-jurisdictional Environmental Assessments is often inadequate.*

Although the Canada-wide accord on Environmental Harmonization is predicated on the principle that "decisions pursuant to the Accord will be consensus based and driven by the commitment to achieve the highest level of environmental quality" (principle #8), there are no other formal or regulatory mechanisms that explicitly require co-ordination of follow-up related activities among federal, provincial and First Nations jurisdictions, or that encourage consensus or agreement regarding the need for and requirements of a follow-up program. The existing Harmonization Agreements and Accords provide little guidance to EA practitioners. This lack of guidance, coupled with a general reluctance of federal authorities and other levels of government to become involved in interjurisdictional matters tends to result in uncertainty regarding the roles and responsibilities of all stakeholders in designing and implementing follow-up.

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Jurisdictional mismatch is also a problem. In joint reviews and depending on the project, much of the follow-up can be set at the provincial level. Depending upon permit requirements, there are several follow-up related activities that are typically required by federal authorities before construction begins. These actions typically include environmental input to detailed engineering design and pre-construction monitoring. Then, once construction takes place, construction monitoring is often required to assess impact predictions and ensure the implementation and effectiveness of mitigation. In the operational phase, follow-up monitoring is frequently required to verify environmental impact predictions and the continuing effectiveness of mitigation efforts. In many cases, federal authorities are only able to fulfill their follow-up responsibilities by deferring to provincial permitting processes, that often occur after the EA review process has been completed and federal authorizations, licenses and permits have been issued. The timeframes and staged permitting approaches adopted in many jurisdictions tend to force federal departments to define their detailed follow-up requirements during the EA process in the absences of detailed baseline information or results from construction or operational monitoring. In addition, few federal departments have procedures for the transfer of knowledge and data from EA teams to those responsible for permitting and enforcement. Few tools or mechanisms exist that allow federal authorities to track a project from the initiation of the EA through all project development stages.

Issue: *Federal authorities lack the financial and human resources to conduct follow-up*

Some EA practitioners want to do follow-up, but felt that they do not have adequate resources necessary, to do it. Departmental resources for project environmental assessments do not currently include the resources (financial, qualified staff) required to conduct follow-up programs. Budgeting is often inadequate for environmental work beyond the initial environmental assessment. Funding for follow-up programs for internal capital projects is particularly problematic. It is difficult to secure and maintain such funds, particularly for programs that may last several years. For private sector projects, proponents are reluctant to pay any more money than they have to, and feel that it is not their responsibility to fund research on the effectiveness of mitigation measures. There are also a lack of resources and enforcement mechanisms to act on the results of follow-up programs that show that further action is required.

Federal authorities involved in environmental assessments of international projects may not have sufficient financial and human resources to lever action when a external proponent does not follow through with commitments concerning specific mitigation or follow-up activities. In some cases, it may be impossible to take any follow-up action.

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5.2.2 Content of Follow-up Programs

Issue: *The design, implementation and review of follow-up programs is inconsistent.*

The definition of follow-up under the Act has been interpreted to mean different things to various participants in the EA process. Complicating this issue, there are also many different definitions of what is meant by the term 'monitoring'. Although 'follow-up' is clearly defined in the Act, the manner in which this definition is operationalized or transformed into a 'follow-up program' in practice is inconsistent and in some cases problematic. There is currently no widely accepted definition of what information is required and what activities should be undertaken as part of an effective and efficient follow-up program.

With respect to follow-up in comprehensive study reports and panels, consultation by the Agency indicates that some EA practitioners interpreted follow-up to mean strictly ensuring that the specific mitigation measures identified in an EA were put in place. In such cases, neither objective of follow-up as defined by the Act is being achieved (i.e., verifying accuracy or determining the effectiveness of mitigation). Others view follow-up to include only routine monitoring activities as identified by the proponent of the RA. Still others view follow-up as those activities over and above what would routinely be required of a proponent. For example, work related to assessing the impacts of heat on soils and vegetation downstream of compressor stations and reclamation in certain areas of native prairie on the Express Pipeline Project were explicitly identified as follow-up programs by the National Energy Board (NEB).

In one case, it was observed that activities considered as follow-up were combined with monitoring and inspection so that all the activities that would be undertaken were clear to the public. For example, within the context of a major pipeline comprehensive study, the National Energy Board stated that the inspection and monitoring programs for the project meet the need for an appropriate follow-up program. Similarly, within the context of the Express Pipeline Project report of the Joint Review Panel, the Panel found that the National Energy Board's requirements pursuant to section 58 of the Onshore Pipeline Regulations satisfied the requirements for a follow-up program within the context of the CEAA for that project. Section 58 of the Onshore Pipeline Regulations states:

58.(1) Where a company is granted leave to open a pipeline or a section thereof, the company shall, if requested to do so by the terms and conditions of a certificate issued pursuant to section 52 of the Act or of an order made pursuant to section 58 of the Act, file with the Board a post-construction environmental report within six months after the date of the granting of leave to open the pipeline or section thereof.

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- (2) *The post-construction environmental report referred to in subsection (1) shall set out the environmental issues that have arisen up to the date on which the report is filed and shall*
 - (a) *indicate the issues resolved and those unresolved; and*
 - (b) *describe the measures that the company proposes to take in respect of the unresolved issues.*
- (3) *Where, pursuant to subsection (1), a company files a post-construction environmental report, the company shall file with the Board, on or before each December 31 that next follows each of the first two complete growing seasons after the report is filed,*
 - (a) *a list of the environmental issues indicated as unresolved in the report and those that have arisen since the report was filed, if any; and*
 - (b) *a description of the measures the company proposed to take in respect of any unresolved environmental issue.*

In the absence of a clear definition, practitioners are not in agreement as to whether or not there is a distinction between what the Board considers monitoring and what is follow-up. The common view at the National Energy Board was that follow-up would clearly include those activities that go above and beyond what is routinely considered monitoring.

No guidelines, standards or procedures exist regarding the design and implementation of follow-up. Little formal guidance or training has been provided by the Agency or individual departments on the design, implementation and review of follow-up programs. Practitioners are uncertain of what is expected or required in terms of:

- how to decide on the need for, and duration of, a follow-up program;
- who should pay for follow-up activities;
- roles and responsibilities beyond the letter of the Act;
- the design and implementation of a follow-up program;
- factors and scope to be considered;
- procedures to deal with inaccurate predictions and ineffective mitigation measures; and
- procedures for community involvement.

Practitioners also identified a need for guidance on identifying and making trade-offs associated with cost/time versus benefits gained by conducting follow-up studies.

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Follow-up programs contained in EA reports are inconsistent and contain many different components, some of which do not fulfill a follow-up function. The desk-top analysis revealed that, depending upon the project, the activities of a proponent and FA that were *considered* as follow-up included:

- additional research and studies;
- auditing of detailed engineering design studies;
- baseline environmental monitoring;
- environmental permitting and reporting;
- institutional arrangements and public involvement;
- environmental effects monitoring;
- compliance and operational monitoring;
- routine inspection of construction activities and associated reporting;
- additional research and studies to assist in future impact predictions and identification of additional mitigation; and
- implementation of contingencies.

In all the cases examined in the desk-top review, there exist elements within follow-up programs that are aimed at both verifying the accuracy of the EA and determining the effectiveness of mitigation measure. The main focus of the follow-up programs however, (i.e., verifying accuracy or determining effectiveness of mitigation) tend to vary.

These inconsistencies may be partially the result of the project specific and site specific nature of follow-up requirements. Depending upon the project and the proponent, EA studies are completed to varying degrees of detail. Consequently, the focus and type of follow-up program also varies. For example, follow-up programs within EAs completed in a generic fashion and those that rely heavily on secondary source data for their environmental baseline characterization tend to focus more on verifying the accuracy of the EA (i.e., effect monitoring). Follow-up programs for projects with more long term or regional environmental effects, where there exists considerable uncertainty regarding the accuracy of predictions into the future, also tended to focus more on verifying of the accuracy of the EA.

On the other hand, follow-up programs within EAs that have a well defined environmental baseline, detailed impact predictions and clearly identified mitigation measures, tend to be more comprehensive but focus more on programs that are aimed at determining the effectiveness of mitigation and monitoring compliance with regulations, terms and conditions of approvals. In addition, projects with more short term environmental effects that are limited in their geographic extent, (i.e., typically those occurring during the construction phase), also tended to focus their follow-up programs on determining the effectiveness of mitigation measures.

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In one of the cases examined, the follow-up program was focused solely on operational or compliance monitoring (i.e., the monitoring of effluents, emissions and operational processes) rather than effects monitoring or determining the effectiveness of mitigation. Such an approach assumes that if the project was operating as designed and remained in compliance with regulatory requirements then the resultant environmental effects were also 'as predicted' and the mitigation incorporated into the project design was also effective. This was the case with the off-shore oil/gas Terra Nova Development where the main component of the follow-up program was intended to ensure that contaminant levels in regulated discharges (i.e., drilling muds and cuttings, well treatment fluids, cooling water, deck drainage and air emissions) met regulatory requirements.

Overall, the lack of a clear definition for what constitutes a follow-up program and the need for flexibility on the part of project proponents and FA to design follow-up programs to suit each project has resulted created inconsistencies in how "follow-up" is defined and implemented in practice.

Issue: *Poor environmental assessment baseline studies and impact assessments prevent effective follow-up program decision-making.*

Consultation with EA practitioners indicate that most EAs do not treat follow-up or monitoring as an integral part of the environmental assessment process. As mentioned above, follow-up generally takes the form of a commitment to undertake a variety of activities which may or may not be directly linked to baseline environmental studies, predictions of effects and recommendations for mitigation contained in the EA reports. Moreover, EA practitioners consulted by the Agency indicated that the project description and environmental baseline characterizations contained in some EAs, but particularly screenings, are incomplete or incorrect, which results in predictions that are vague or untestable. Even where hypotheses are testable, the ability to measure subtle changes in baseline conditions given natural fluctuations tends to be limited. Often, appropriate baseline data are not generated prior to project implementation and therefore, project-related impacts are not identified or assessed with enough certainty to allow decision-making on the need for and requirements of a follow-up program. This is particularly a problem for the Canadian International Development Agency (CIDA) and other international projects, where baseline information may not exist and would be cost-prohibitive to obtain.

A follow-up program may also be desirable for project modifications, decommissioning, and abandonment. Unless the project is for a project modification, decommissioning or abandonment activity, follow-up programs contained in EAs do not typically address these project phases because many EA practitioners and project proponents cannot or are unwilling to make predictions and commitments far into the future. Consequently, federal authorities are constrained in their ability to design appropriate follow-up programs for these latter project phases and incorporate them into project permits and approvals.

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Although follow-up programs are necessarily project and site specific, there are few guidelines, standards or procedures for the design of baseline environmental studies or environmental effects monitoring programs. Moreover, the science, tools and techniques used in predicting and assessing environmental effects is not mature and continues to evolve. This is particularly true for areas such as cumulative effects assessment, risk assessment, and socio-economic impact assessment. Little formal training has been provided by the Agency or individual departments to assist federal staff and project proponents in the design and implementation of appropriate studies. For example, industry and government working groups studying the aquatic effects of mining in Canada concluded that "...adequate guidance for designing and implementing a proper effects monitoring program for the mining sector was lacking".

Issue: *Knowledge gained from environmental assessments and follow-up programs is not captured, shared or retained effectively.*

Although there are many good examples of case study and ex post facto research conducted by industry and federal departments on specific aspects of EA practice and environmental management, most federal authorities do not have a systematic method to capture, share and retain knowledge gained from environmental assessments and follow-up programs. As noted by the Steering Committee studying the aquatic effects of mining in Canada:

"A considerable number of aquatic effects studies have been completed by the mining sector. As there is no national monitoring framework, however, the quality and nature of aquatic monitoring studies conducted throughout Canada have been variable and the lack of consistency, even within particular sites, was a concern."

Both the Agency's consultation activities and the desk-top review indicated that little reporting on follow-up results, interim and final, is done by federal authorities. When there is a reporting requirement on a proponent, provincial or federal authority, reports generally go to the staff person handling the file in a federal department. The results do not tend to be shared with others in the department or beyond.

With respect to follow-up programs, the public registries of individual federal departments and the Federal Environmental Assessment Index (FEAI) are two tools that are available for this purpose. Some federal departments may have developed other systems or tools. However, placement of the information in a department's public registry, as required by the Act, is inconsistent and the use of the FEAI is discretionary. Each department has developed its own procedures for handling its responsibility for establishing a public registry, consequently, the information contained in each varies. Sections of the registry forms regarding follow-up do not contain sufficient information regarding the follow-up to be useful as a tool for capturing,

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sharing and retaining knowledge gained from environmental assessments. These public registries are currently used as an initial registration tool, and for tracking the project until an approval is granted. Posting of information on mitigation measures, follow-up programs, and follow-up results after approvals are granted is sporadic. Public access, by electronic means, to the public registries of individual departments is poor or non-existent.

The Federal Environmental Assessment Index created by the Agency is intended to provide "one window" access to information on the who, what, where and when and why of any environmental assessment conducted under the Act, regardless of the RA. The Commissioner of the Environment and Sustainable Development (1998) reports that officials of federal authorities who use the FEAI find it difficult to use, as the system appears to be slow, awkward and time consuming. As noted in the Commissioner's report, this may account for the fact that fewer than half of the 187 project reviewed during the Commissioner's audit had been registered in the FEAI before the EA was completed and decisions made.

The FEAI available to the public provides only the basic information regarding an Environmental Assessment with no reference to follow-up. Although elements of the FEAI is electronically accessible to the public, it is not available in its entirety or electronically linked to the public registries of individual federal departments, making access to detailed information difficult. The Commissioner's report supports the conclusion that even when information is entered properly and on-time, the FEAI is not as useful as it could be and may in fact, deter public input.

There is currently no information regarding follow-up on the FEAI, making it difficult to keep track of follow-up activities of proponents and federal departments at any given time. At present, the search tools available on the FEAI do not allow for efficient research or the production of summaries of follow-up activities for preparing quarterly and annual reports on follow-up activities of RAs, or for individual or groups of projects.

5.2.3 Permitting and Enforcement

Issue: *Federal authorities have difficulties ensuring compliance with follow-up commitments contained in EAs.*

Design and implementation of follow-up is often delegated to the proponent or an independent third party (e.g., inspectors, liaison committees, other federal or provincial authorities) without appropriate mechanisms available to the RA to ensure that it is being carried out. Among federal authorities, most expect that their recommendations on mitigation and follow-up activities will be incorporated as terms and conditions into the authorizations, licenses and

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permits issued by an RA. This is not always accomplished. The degree to which advice and guidance provided by federal authorities are incorporated into federal authorizations, licenses and permits varies by project, department and region. Federal authorities do not always receive feedback on what has been incorporated into a project approval, what has not, and why. Moreover, departments do not always check to see if their recommendations have been considered.

From the consultation activities and the desk-top analysis, it appears that RAs with a CEAA law list trigger will incorporate their own conditions related to an authorization, license or permit, but may or may not always address the concerns and requirements of other federal authorities. Although EAs examine a very broad range of potential effects on the environment, the follow-up items included in federal authorizations, permits and licenses are typically narrow in scope. For example, Fisheries Act Authorizations issued by the Department of Fisheries and Oceans (DFO) typically only address issues related to fisheries issues (e.g., sediment control programs, site drainage works, construction schedules) and the requirements of any fisheries impact/habitat compensation plans that were prepared to address the requirements of the DFO "Policy for the Management of Fish Habitat". This may be due, in part, to the fact that EAs may not have identified a need for follow-up or that the residual impacts in other areas of concern were considered to be insignificant. Finally, some RAs may be constrained by their own legislation and permitting structure.

Regardless, the follow-up objectives of verifying predictions made in the EA and the effectiveness of mitigation measures identified in the EA are not completely achieved in most cases. Overall, many RAs are reluctant to include follow-up items that are beyond their mandates in the authorizations, permits and licenses that are issued (e.g., including a condition of approval regarding Migratory Birds within a Fisheries Act Authorization). Where an RA has a mandate to consider a wider range of effects (e.g., National Energy Board), follow-up items contained in their authorizations, permits and licenses reflect this broader scope and tend to address the concerns of other federal authorities to a greater degree (Gartner Lee Limited, 1998a).

In addition to involvement in the federal permitting or licensing processes, ensuring compliance with follow-up commitments is also a challenge. The Act does not contain sanctions, but rather relies on departments and proponent to be "diligent corporate citizens." Many departments, themselves, do not have the legislative authority to require financial assurances for project nor the means available to enforce follow-up requirements under the Act. With some environmental assessment triggers, departments do not have the legislative authority to lever action when a proponent does not follow through with commitments concerning specific mitigation or follow-up activities. In other cases, it may be impossible to take any enforcement action. For example, in cases where the Act is triggered by funding or the granting of interest

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in federal land (e.g., Industry Canada and CIDA projects), funds are expended or other forms of assistance are provided up-front. If the proponent does not fulfill their mitigation or follow-up commitments, there may be no mechanism to recover the funds/lands provided or withdraw other forms of assistance.

Issue: *Few incentives exist to conduct follow-up.*

Although the public, proponents and practitioners have generally accepted the necessity for environmental monitoring in the assessment process, once an environmental assessment is complete and project approval has been given, there is little incentive to conduct follow-up. For example, working groups studying the aquatic effects of mining in Canada "...identified several cases where regulatory agencies requested environmental monitoring as a condition for granting a permit or license, but the agencies did not review the results adequately nor did they provide timely feedback on the studies" (AQUAMIN, 1996). A lack of leadership and management support for follow-up was identified during the Agency's consultative sessions as a key reason for the lack of follow-up efforts.

The apparent lack of incentive to conduct follow-up may also be a function of the federal authority conducting the EA. For example, it is the mandate of some federal authorities to facilitate growth and development through the provision of lands, funds and other forms of aid (e.g., Industry Canada and CIDA). In this context, follow-up (and in some cases the entire EA process) is seen as an impediment to the fulfillment of this mandate by providing additional regulatory and administrative burdens on both the funding agency and the receiving organization. In some cases, the level of federal involvement in a project may be limited, but the environmental implications of the project may be significant. With minimal federal involvement, some federal authorities are reluctant to design and implement a robust follow-up program that does not correspond to the type or level of its involvement.

The Canadian Environmental Assessment Agency plays a significant role during the review of an EA (i.e., Comprehensive Study or EA for Panel review) in ensuring that the provisions of CEAA are met, and in setting Terms of Reference for review Panels under the Act and co-ordinating Panel reviews. Following the submission of the final EA, the current role of the Agency does not allow it to significantly contribute to the efficient and effective implementation of follow-up activities by RAs and project proponents, beyond the provision of advice, guidance and training. The only mechanism identified in case studies that allowed the Agency to monitor that follow-up is undertaken is a written request by the Agency that the RA report back to the Minister of Environment and/or the Agency on its post-approval follow-up activities.

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Typically, the Minister of Environment refers projects for which comprehensive studies have been completed back to the RA for action to be taken under s.37(1) (a) (I) of the Act and may conclude that, in considering the EA and public comments, the project is not likely to cause significant adverse environmental effects. In most referral letters, the Minister recommends that the RA ensure that the mitigation described in the EA is implemented and that the RA design and implement a follow-up program that can determine the effectiveness of any measures taken to mitigate the adverse environmental effects of the project and verify the accuracy of the environmental assessment. The referral letter typically indicates that specific conditions to address potentially affected areas of federal jurisdiction should be included in the authorizations, permits and licenses sought by the proponent. There does not appear to be a formal mechanism for the Minister to identify and impose terms and conditions onto the RA or the project proponent that can be effectively enforced.

In only one of the comprehensive studies examined in the desk-top review did the Minister of Environment indicated to the RA that a number of conditions should be adhered to. In the Athabasca Seasonal Road Project, the Minister of Environment concluded that based upon information presented in the EA, the project was not likely to cause any significant adverse environmental effects taking into account the implementation and mitigation measures and the conduct of follow-up requirements. The RA was given authority to proceed with approvals under the assurance that mitigation measures and monitoring requirements were implemented.

5.3 Summary of Issues and Root Causes

Table 1 summarizes the nine key problems/issues, their root causes and contributing factors (i.e., contextual or system issues or problems) according to the three themes identified by the Follow-up Subcommittee.

An examination of Table 1 indicates that there are several common root causes:

- no regulations, guidelines, standards or procedures exist regarding the design and implementation of follow-up;
- few guidelines, standards or procedures exist regarding the design and implementation of environmental studies or programs that support follow-up;
- little formal training has been provided by the Agency or individual departments on follow-up;
- uncertainties exists regarding the roles and responsibilities in designing and implementing follow-up; and
- no formal or regulatory mechanisms exist to allow for consensus or agreement building among federal, provincial authorities, First Nations and other stakeholders involved in an EA

Table 1. Summary of Issue, Root Causes and Contributing Factors

Issue	Root Cause(s)	Contributing Factors
Management, Roles and Responsibilities		
<i>There are various interpretations of what is required under Section 38 of the Act</i>	<ul style="list-style-type: none"> No regulations, guidelines, standards or procedures exist regarding the design and implementation of follow-up. RAs are not certain on how to decide when a follow-up program is required. 	<ul style="list-style-type: none"> No consensus exists regarding legal interpretations of case law.
<i>Co-ordination of follow-up activities among federal authorities is often inadequate.</i>	<ul style="list-style-type: none"> Uncertainties exist regarding the roles and responsibilities in designing and implementing follow-up. The extent of an RAs discretion is uncertain. No formal or regulatory mechanisms exist to allow for co-ordination of follow-up activities, consensus or agreement building between federal authorities involved in an EA. 	<ul style="list-style-type: none"> Financial and human resources to conduct follow-up are lacking. Canada's geography and the different organizational structures of federal departments constrain co-ordination efforts.
<i>Co-ordination of follow-up activities in multi-jurisdictional EAs is often inadequate</i>	<ul style="list-style-type: none"> Uncertainties exist regarding the roles and responsibilities of all stakeholders in designing and implementing follow-up. No formal or regulatory mechanisms exist to allow for co-ordination of follow-up activities, consensus or agreement building between stakeholders in multi-jurisdictional EAs or ongoing involvement of federal authorities in follow-up decision-making. 	<ul style="list-style-type: none"> Federal Co-ordination Regulations provide little guidance. Harmonization Agreements and Accords provide little guidance for the EA practitioner. Provincial permitting processes (i.e., timeframes, staged approvals) constrain federal involvement in follow-up decision-making throughout project development. Canada's geography and the different organizational structures of federal, provincial, territorial governments constrain co-ordination efforts.
<i>Federal authorities lack the financial and human resources to conduct follow-up</i>	<ul style="list-style-type: none"> Budgeting is often inadequate for environmental work beyond the initial environmental assessment. Few tools exist that can facilitate project tracking and co-ordination of follow-up activities. 	<ul style="list-style-type: none"> It is difficult to secure and maintain funds, particularly for follow-up programs that may last several years. Human resources are allocated to support the core activities within a federal department. EA and follow-up in particular are not viewed as core activities.
Content of Follow-Up Programs		
<i>The design, implementation and review of follow-up programs is inconsistent.</i>	<ul style="list-style-type: none"> There is currently no widely accepted definition of what comprises a follow-up program. The Act defines what a follow-up program is intended to do, but provides no guidance regarding how the definition should be operationalized in practice. No regulations, guidelines, standards or procedures exist regarding the design or implementation of follow-up. Little formal training has been provided by the Agency or individual departments. 	<ul style="list-style-type: none"> Follow-up programs are necessarily project and site specific, and need to be different for each project and proponent. Federal Authorities require flexibility in decisions regarding the need for, and design of follow-up programs.

Table 1. Summary of Issue, Root Causes and Contributing Factors

Issue	Root Cause(s)	Contributing Factors
<i>Poor environmental assessment baseline studies and impact assessments prevent effective follow-up decision-making</i>	<ul style="list-style-type: none"> Project description and environmental baseline characterizations contained in most EAs are incomplete, incorrect or they are not generated prior to project implementation. Few regulations, guidelines, standards or procedures exist regarding the design, implementation of baseline environmental studies that support monitoring programs. Little formal training has been provided by the Agency or individual departments. 	<ul style="list-style-type: none"> The science and techniques used in predicting and assessing environmental effects are not mature and continue to evolve.
<i>Knowledge gained from EA and follow-up programs is not captured, shared or retained effectively.</i>	<ul style="list-style-type: none"> Follow-up program results do not tend to be shared with others in the department or beyond. Follow-up is not conducted systematically to allow for knowledge gained from environmental assessments and follow-up programs to be captured and shared. Few mechanisms exist to capture, share and retain knowledge gained from environmental assessments and follow-up programs. 	<ul style="list-style-type: none"> Placement of information in a department's public registry, as required by the Act, is inconsistent. Each department has developed its own public registry, consequently the information contained in each varies. Public access by electronic means to the public registries of individual departments is poor. FEAI appears to be difficult to use, slow, awkward and time consuming. There is currently no information regarding follow-up on the FEAI. The search tools available on the FEAI do not allow for efficient research or the production of summaries of follow-up activities.
<i>Federal authorities have difficulties ensuring compliance with follow-up commitments contained in EAs</i>	<p style="text-align: center;">Permitting and Enforcement</p> <ul style="list-style-type: none"> Federal Authorities tend to avoid follow-up on issues that are beyond their mandates. Responsibilities for follow-up are often delegated without appropriate mechanisms in-place to ensure it is being carried out. The Act does not contain any sanctions and many Federal Authorities do not have the legislative authority to enforce follow-up requirements under CEA. There are few mechanisms available that allow an RA to act on the results of follow-up programs that show that further action is required. 	<ul style="list-style-type: none"> The mandates of most RAs are narrowly defined. Few precedents or mechanisms exist for incorporating follow-up items beyond an RAs mandate. "Funding" and/or "land" triggers are problematic in that funds and other forms of assistance are provided up-front with no mechanisms available to recovery/withdraw them to enforce follow-up commitments or act on results.
<i>Few incentives exist to conduct follow-up</i>	<ul style="list-style-type: none"> There is a lack of leadership and management support for follow-up. The ability of the Minister of Environment and the Agency to ensure follow-up is conducted is limited. 	<ul style="list-style-type: none"> Follow-up is viewed as an impediment to fulfillment of some departmental mandates.

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6. Identification of Potential Options/Tools

Although there are many options/tools for improving the manner in which follow-up is undertaken under the Act, the types of options/tools available involve creating or changing the following:

1. Acts/Legislation;
2. Regulation;
3. Ministerial Guidelines and Agreements;
4. Operational Policies;
5. Guidelines, Standards and Procedures;
6. Programs and Practices;
7. Communication and Training Programs.

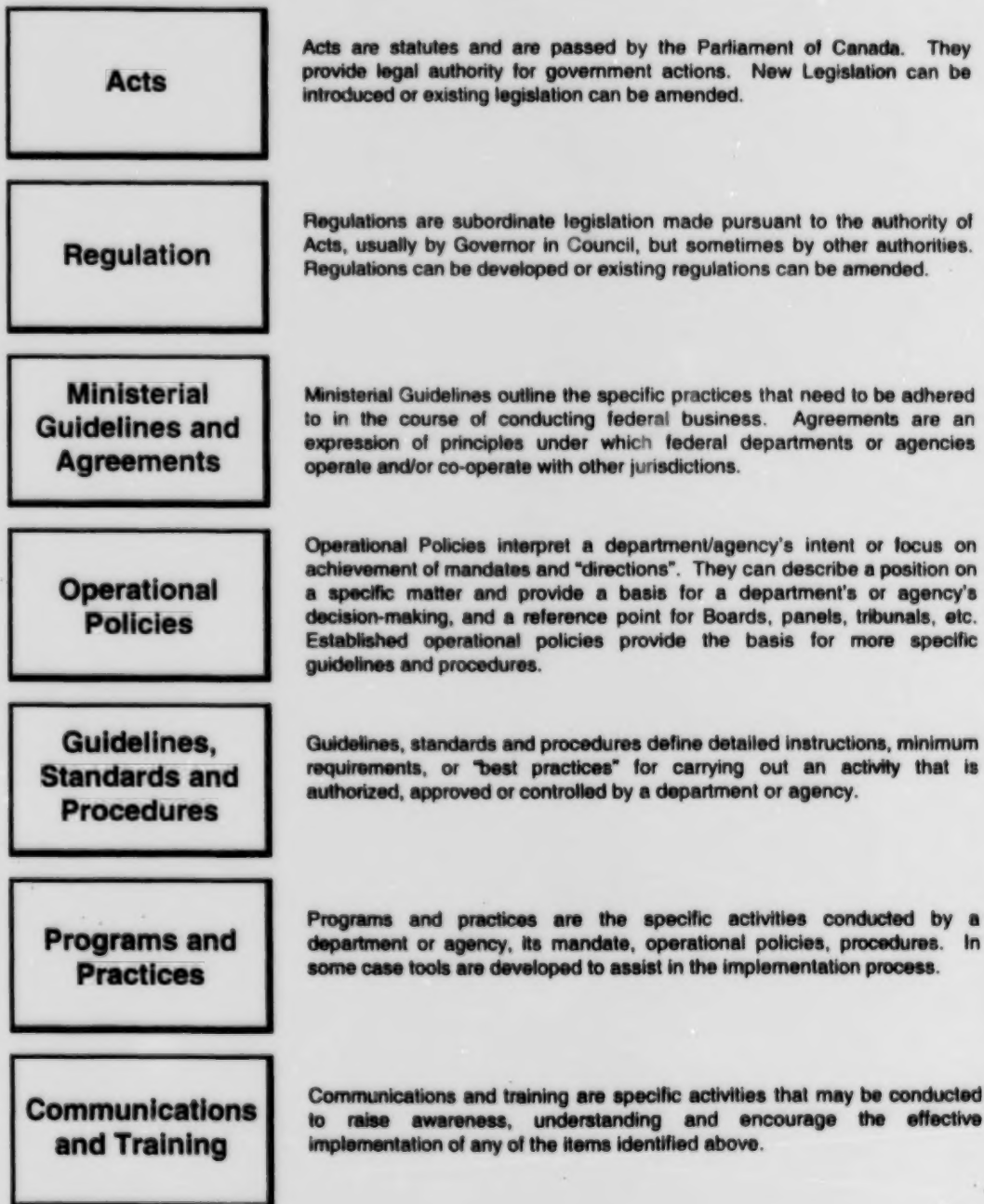
Figure 2 defines these generic types of options/tools and illustrates how they are related in terms of a hierarchy. Based on this hierarchy, research conducted by the Agency and consultation with other federal departments, the Follow-up Subcommittee identified 20 options or tools that could improve the manner in which follow-up is undertaken under the Act.

It is important to note that these options/tools are not mutually exclusive, and that it is likely that several of these may need to be pursued or implemented to effectively address all the problems/issues identified regarding follow-up. For example, training on the part of the Agency and individual departments will likely be required as part of any approach to improving follow-up. Similarly, not all options need to be implemented at one time. For example, formal standards could evolve from guidelines. Once they have been proven effective and are well accepted by government and industry. To this end, there is not likely one single option/tool that will address all of the problems/issues identified. This section provides a "tool box" from which a strategy or action plan will be recommended.

The options/tools identified are listed in Table 2 along with the issues or problems they are intended to address.

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Figure 2. Hierarchy of Options / Tools



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Table 2. Options/Tools Identified and the Issues/Problems Intended to be Addressed

Option/Tool	Issue / Problem Addressed
Management and Clarifying Roles and Responsibilities	
1. Expansion of the Federal Co-ordination Regulations	<ul style="list-style-type: none"> • Inadequate co-ordination of follow-up activities among federal authorities
2. Development of Subsidiary Agreements under Federal-Provincial and Territorial Cooperative Agreements	<ul style="list-style-type: none"> • Inadequate co-ordination of follow-up activities in multi-jurisdictional Environmental Assessments
3. Voluntary Use of Interdepartmental Co-ordinating Committees	<ul style="list-style-type: none"> • Inadequate co-ordination of follow-up activities among federal authorities and in multi-jurisdictional Environmental Assessments
4. Voluntary Use of Environmental / Liaison Committees	<ul style="list-style-type: none"> • Inadequate co-ordination of follow-up activities among federal authorities and in multi-jurisdictional Environmental Assessments
5. Compliance Monitoring of RA/FA Follow-up Activities	<ul style="list-style-type: none"> • Few incentives exist to conduct follow-up. • Inconsistent design and implementation of follow-up programs • Capturing, sharing and retaining knowledge gained from Environmental Assessments.
Content of Follow-up Programs	
1. Amending the CEAA and/or Developing of Follow-up Regulations	<ul style="list-style-type: none"> • Various interpretations of what is required under Section 38 of the Act • Few incentives exist to conduct follow-up. • Inconsistent design and implementation of follow-up programs
2. Agency Guidelines or Operational Policies	<ul style="list-style-type: none"> • Various interpretations of what is required under Section 38 of the Act • Few incentives exist to conduct follow-up. • Inconsistent design and implementation of follow-up programs
3. Departmental Guidelines	<ul style="list-style-type: none"> • Inconsistent design and implementation of follow-up programs • Poor environmental assessment baseline studies and impact assessments
4. Development of Standards, Codes of Practice or Protocols	<ul style="list-style-type: none"> • Inconsistent design and implementation of follow-up programs • Poor environmental assessment baseline studies and impact assessments
5. Follow-up Related Tools to Improve Practices/Procedures	<ul style="list-style-type: none"> • Inconsistent design and implementation of follow-up programs • Lack of financial and human resources to conduct follow-up • Capturing, sharing and retaining knowledge gained from Environmental Assessments
6. Improving Public Registries / Federal Environmental Assessment Index	<ul style="list-style-type: none"> • Capturing, sharing and retaining knowledge gained from Environmental Assessments
7. Development and Delivery of Training Programs	<ul style="list-style-type: none"> • Inconsistent design and implementation of follow-up programs • Poor environmental assessment baseline studies and impact assessments • Capturing, sharing and retaining knowledge gained from Environmental Assessments

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Table 2. Options/Tools Identified and the Issues/Problems Intended to be Addressed

Option/Tool	Issue / Problem Addressed
Permitting and Enforcement	
1. Inclusion of Follow-up Related Conditions in Relevant Authorizations, Licences, Permits and Approvals	<ul style="list-style-type: none"> Ensuring compliance with follow-up commitments contained in EAs
2. Development of an 'Umbrella' Approval for Follow-up Programs	<ul style="list-style-type: none"> Ensuring compliance with follow-up commitments contained in EAs
3. Agreements, Contracts between RA/FAs, Project Proponents and Other Stakeholders	<ul style="list-style-type: none"> Ensuring compliance with follow-up commitments contained in EAs
4. Expanded Use of Financial Assurances	<ul style="list-style-type: none"> Ensuring compliance with follow-up commitments contained in EAs Lack of financial and human resources to conduct follow-up
5. Staged Approvals and/or Progressive Funding	<ul style="list-style-type: none"> Ensuring compliance with follow-up commitments contained in EAs Lack of financial and human resources to conduct follow-up
6. Conducting Follow-up Evaluations of Projects	<ul style="list-style-type: none"> Ensuring compliance with follow-up commitments contained in EAs Capturing, sharing and retaining knowledge gained from Environmental Assessments Lack of financial and human resources to conduct follow-up Inconsistent design and implementation of follow-up programs
7. Expanded Use of Environmental Inspectors	<ul style="list-style-type: none"> Ensuring compliance with follow-up commitments contained in EAs Lack of financial and human resources to conduct follow-up
8. Expanded Use of Sanctions/ Fines for Non-Compliance	<ul style="list-style-type: none"> Ensuring compliance with follow-up commitments contained in EAs

7. Description and Evaluation of Options/Tools

The following sections provide a description (i.e., a brief definition) of the identified follow-up related options/tools. Where available, examples are provided and described that illustrate what could be done (e.g., sample definitions, criteria for determining when a follow-up program is necessary, monitoring agreements, audit reports, etc.). The advantages and disadvantages of each option/tool are also evaluated. The criteria used in this preliminary evaluation of options/tools are identified and defined in Table 3.

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Table 3. Evaluation Criteria

Criterion	Key Questions
1. Applicability / Responsiveness	<ul style="list-style-type: none"> Which issue(s) does this option address? What types of Environmental Assessments is it most applicable to (i.e., screenings, comprehensive studies, Panels and mediations)
2. Compatibility with the Canadian Environmental Assessment Act (i.e., legality)	<ul style="list-style-type: none"> Can the option be implemented without modification of the existing CEAA?
3. Compatibility with other Existing Legislation / Regulations (i.e., legality)	<ul style="list-style-type: none"> Can the option be implemented without modifications to other legislation / regulations?
4. Timing / Implementation Opportunities	<ul style="list-style-type: none"> How quickly can the option be implemented? Can it be easily changed or modified at a later date? Are there other federal department / agency initiatives ongoing that can assist in implementing the measure?
5. Effectiveness	<ul style="list-style-type: none"> What is the likelihood of success of this option? Is there a likelihood of a direct improvement in environmental quality as a result? Are there any Canadian precedents or elsewhere? Are there any successful examples of its use/implementation?
6. Effect on Federal Departments and Agencies Provinces and Territories (i.e., fairness, intrusiveness)	<ul style="list-style-type: none"> What is needed to implement this option and who would be required to implement it? Does this have significant cost implications? Who / what will benefit? Is this fair?
7. Effect on Proponents, Industry and the Public	<ul style="list-style-type: none"> Does this have cost implications to proponents? Who / what will benefit? Is this fair?
8. Relationship to Other Options/Tools	<ul style="list-style-type: none"> Because options/tools are not likely to 'stand-alone' it is necessary to determine if an option can be implemented on its own, or are other measures required to support it?

7.1 Improving Management and Clarifying Roles and Responsibilities

The following sections identify and describe five (5) broad options or tools that could be used to improve the manner in which the process by which federal authorities fulfill their roles and responsibilities under CEAA regarding follow-up. In most cases there are different ways in which an option or tool could be implemented. Where possible, these are identified and described. This section does not define what the specific roles and responsibilities of federal departments and other stakeholders are within the EA process.

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7.1.1 Expansion of the Federal Co-ordination Regulations

The "Regulations Respecting the Co-ordination by Federal Authorities of Environmental Assessment Procedures and Requirements" set out the notification and response requirements for federal authorities with respect to a project. These regulations do not explicitly address follow-up, but require that RAs consult with other federal authorities in determining the factors to be considered in an EA, and their scope, pursuant to Section 16 of the Act.

The Federal Co-ordination Regulations could be expanded and used in a variety of ways to clarify the roles and responsibilities of federal departments and agencies involved in an EA. The various ways in which the regulations could be expanded are described below.

1. The expansion of the regulations to explicitly require a FA that requires an EA of a project, or who "possesses specialist or expert information or knowledge" to formally communicate its *intention* to include mitigation or follow-up related Terms and Conditions in the authorization, license, permit or approval granted by an RA. In this case, the expanded regulations could also:
 - recommend the time frame within which such an intention should be submitted to the RA;
 - recommend the format in which a FA should communicate its intent to include mitigation or follow-up related Terms and Conditions;
 - recommend from whom and/or to whom such communications should be made (i.e., management vs. staff levels); and
 - clarify the roles and responsibilities of the federal authority imposing a Term or Condition for implementing follow-up specified in the Terms and Conditions.
2. The expansion of the regulation to give authority to an RA to establish an interdepartmental co-ordinating committee to facilitate the involvement of Federal Authorities in the EA review process, and in determining the need for and requirement of a follow-up program.
3. The expansion of the regulations by including a procedure by which a RA would consult with other federal authorities in determining the factors to be considered in an EA and their scope, pursuant to Section 16 of the Act.
4. The expansion of the regulation to include a requirement and/or procedure by which a RA would notify other federal authorities and the public of its intention to issue an authorization, license or permit with the intent of soliciting comments.

This option assumes that the Agency would take the lead in drafting and implementing amendments to the Federal Co-ordination Regulations. Practices and procedures would be required to assist RAs in administering new processes. Training to improve process management, negotiations and conflict resolution skills would also likely be required for staff.

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7.1.1.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Federal Co-ordination Regulations exist and amendments could be made compatible with all other legislation. • Applicable to all types of Environmental Assessments • Could provide an RA with a clearer definition of what the limits to their discretionary powers are in the application of Section 16 of the Act. • All federal authorities would share in the cost of developing regulatory amendments. • Additional regulatory controls on EA process management may be seen positively by industry and the public as a measure to improve EA process efficiency. • Provides the Agency with another mechanism to measure the effectiveness and efficiency of the CEAA 	<ul style="list-style-type: none"> • Regulatory changes would require approximately two to three years to develop and implement. • May be a reluctance to change regulations so recently promulgated. • Not cost effective for most screenings. The need for expanded federal co-ordination regulations for screenings is questionable. • Not applicable to EA conducted as a result of a funding/land triggers or for projects outside of Canada (e.g., CIDA projects) where only one FA is typically involved. Not all EAs become involved in an EA at the same time. • Prescriptive regulations may also detract from the flexibility and ability to innovate. • Implementation may require greater technical staff time to be devoted to process management rather than on technical issues, potentially affecting the quality of technical reviews. • Effectiveness is uncertain and will likely depend upon the willingness and ability of federal authorities to comply with the regulations. • Costs of developing and implementing regulatory amendments are not known. • Compliance with overly prescriptive regulations may be difficult for all projects and may preclude involvement of FA in decision-making at appropriate project stages. • Cost recovery regarding the establishment and operation of inter-departmental co-ordinating committees would likely be resisted by proponents and industry.

7.1.2 Development of Subsidiary Agreements under Federal-Provincial and Territorial Co-operative Agreements

Some Federal-Provincial Harmonization Agreements include provisions for the development of co-operative agreements regarding guidelines or operating procedures, and the establishment of joint review boards. For example, the Canada-British Columbia Agreement specifies in paragraph 31(g) that subsidiary agreements may be developed regarding the co-ordination of compliance monitoring and follow-up programs. Furthermore, the ongoing devolution from the federal to territorial governments of provincial type powers over land and resources, and the provisions for Aboriginal law-making authority for environmental protection and environmental assessment on settlement lands may provides an important opportunity for the development of other co-operative agreements regarding all aspects of the EA process, including follow-up.

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Therefore, this option involves the development of co-operative other agreements to:

- develop and/or gain acceptance of federal guidelines or operating procedures regarding follow-up;
- establish a common framework regarding the expected content of follow-up programs;
- address the possibility for addressing one jurisdiction's concerns or follow-up requirements in another's authorizations, licenses, permits;
- address the sharing of information/data resulting from the follow-up activities on individual projects by individual jurisdiction;
- explicitly address roles and responsibilities for the co-ordination of follow-up programs to be implemented by federal departments or the Agency; and
- explicitly address funding for such activities.


This option assumes that the Agency would undertake the negotiation of these agreements on an "as required" basis.

7.1.2.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Applicable to all types of EA, but most cost effective for larger screenings, comprehensive studies and Panels where there is a joint assessment involved. • Provides a framework within which the roles and responsibilities between federal, provincial and First Nations would be clarified on a project specific basis. • Experience exists with negotiating Harmonization agreements and subsidiary agreements are possible under treaty and land claim agreements. • Harmonization Agreements have likely contributed to federal-provincial co-operation rather than duplication of efforts (Commissioner of the Environment and Sustainable Development, 1998). • Cost of developing subsidiary agreements would be shared by federal, provincial and territorial governments. Cost would be incurred incrementally. • Development of subsidiary agreements does not have a direct effect on project proponents or industry. • Efforts to streamline and harmonize EA process will likely be well received by proponents and industry if it helps reduce review time and costs and improve clarity over roles and responsibilities. 	<ul style="list-style-type: none"> • Harmonization agreements are not in-place with all jurisdictions. More detailed subsidiary agreements would likely follow development of primary agreements. Establishment of primary agreements will remain a priority. • Subsidiary agreements would likely require initial clarification of federal government objectives regarding follow-up prior to initiation of any negotiations with other jurisdictions. • Not applicable to projects outside of Canada (e.g., CIDA projects). • Broadly worded agreements (e.g., statement of principles) may not be sufficient to address inter-jurisdictional issues. Detailed agreements similar to those being pursued between DFO, the Ontario Ministry of Natural Resources and individual Conservation Authorities may be required. • Ensuring compliance with provisions within harmonization agreements may be difficult as there are no enforcement mechanisms. • Some public stakeholders may view harmonization as abdication of federal responsibilities and ability to enforce environmental quality standards uniformly across the country.

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The Nisga'a Treaty Agreement in Principle states:

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- "2. *The parties will negotiate and attempt to reach agreements for the co-ordination of any Nisga'a federal and provincial environmental assessment requirements, and to avoid duplication where a project is subject to more than one environmental assessment process.*"
- "14. *Canada and Nisga'a Central Government may enter into agreements concerning Nisga'a Government responsibility for the performance of specified federal environmental protection functions.*"

7.1.3 Use of Interdepartmental Co-ordinating Committees

This option involves the establishment of interdepartmental co-ordinating to facilitate the EA review and decision-making regarding follow-up. The establishment of such committees could be governed by regulation (see discussion of Federal Co-ordination Regulations in 7.1.1) or established voluntarily at the discretion of the RA in consultation with other federal authorities.

The expanded use of Interdepartmental Co-ordinating committees could be encouraged by each federal authority by internal policy or by developing internal practices and procedures. Alternatively, the use of such committees and the manner in which they operate (i.e., membership, practices, procedures, roles and responsibilities) could be implemented through the Federal Co-ordination Regulations, a Ministerial Guideline or developed by the Agency within a framework of a Memorandum of Understanding (MOU) among jurisdictions.

Such committees could be established at the beginning of the EA process, prior to issuance of authorizations, licenses or permits, or during project development.

1. Committees established at the beginning of the EA process could:

- set out the roles and responsibilities of the FA/RA throughout the EA review process;
- be empowered to determining the need for and requirement of a follow-up program (in accordance with CEAA and the Federal Co-ordination Regulations); and
- participate in other aspects of the EA review process.

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2. Committees established prior to the issuance of an authorization, license or permit could:
 - negotiate with the project proponent regarding Terms and Conditions for such federal authorization, license, permit or approval granted by a Responsible Authority;
 - gain public input into follow-up programs;
 - negotiate and/or administer financial assurance plans or programs; and
 - establish roles and responsibilities for follow-up activities.

3. Committees established towards the end of the EA process or during project development could:
 - set out the ongoing roles and responsibilities of the FA/RA in the implementation of a follow-up program;
 - reviewing detailed follow-up programs and the results of follow-up activities;
 - gain public input into follow-up programs;
 - administer financial assurance plans or programs;

This option assumes that practices and procedures would be developed to assist RAs in administering new processes and that training to improve process management, negotiation and conflict resolution skills would be available for staff.

7.1.3.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Applicable to all types of Environmental Assessments. • Provides FA with increased access to decision-making and formal mechanism to address follow-up issues. • Improves communication and agreement building (e.g., avoids potential conflicts). • Fully compatible with CEAA and other legislation. • Use and timing of such committees can be regulated under expanded Federal Co-ordination Regulations or a Ministerial Guideline. Alternatively, they can be encouraged through internal policy, practices and procedures in each federal department and supported by an interdepartmental MOU. • Interdepartmental Co-ordinating Committees would formalize the current informal communication/ 	<ul style="list-style-type: none"> • Not cost effective for small scale screenings. • Not applicable to EA conducted as a result of a funding/land trigger or for projects outside of Canada (e.g., CIDA projects) where only one FA is involved. • Roles and responsibilities of such committees may need to be clarified with respect to decision-making authority of Boards and commissions. • Use of such committees would remain at the discretion of the RA. May require negotiation of Memoranda Of Understandings between departments on a global or project specific basis, and/or the development of appropriate internal policies, rules of practice and procedures to encourage their use and ensure effective operation. • Effectiveness will depend upon the ability of an RA to establish and manage an appropriate committee

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Advantages	Disadvantages
<p>consultation process among federal departments during the EA process and during follow-up. Increased efficiency may result. Significant cost implications are not anticipated in most cases.</p> <ul style="list-style-type: none">• Co-ordinating committees have been used successfully in many federal EAs.• Increased efficiency and 'one window' approach to federal government consultation would likely be seen as positive.	<p>process and fund the process.</p> <ul style="list-style-type: none">• Cost recovery regarding the establishment and operation of interdepartmental co-ordinating committees would likely be resisted by proponents and industry.

7.1.4 Use of Environmental Advisory / Liaison Committees

Another common tool used by Responsible Authorities to assist in the management of a follow-up program and improve public involvement in follow-up activities is the formation of an environmental advisory committee or liaison committee during the EA process or during project development. In fact, the use of multi-stakeholder liaison committees was identified by the mining industry as the primary tool for "follow-up on environmental assessment predictions and commitments" (AQUAMIN, 1996).

Such committees are typically comprised of representatives of the proponent, government agencies, First Nations and the public. Through participation on such committees, the RA ensures their ongoing participation in the project and can more easily demonstrate that the follow-up commitments of the proponent are being fulfilled. Such committees typically have the mandate to:

- review the various follow-up related plans and activities;
- track follow-up progress;
- review comment on follow-up reports; and
- in some instances, conduct periodic inspections during construction and operation of a facility.

Federal authorities may also choose not to play a direct role in follow-up but rather to delegate some follow-up activities to the proponent and liaison committees.

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Examples of Co-ordinating Committees Used for Follow-up Purposes

Kemess Mine Project

A Northeast Mine Development Review Committee (NEMDRC) was established for the Kemess Mine Project to assist, where required, the implementation of a co-ordinated approach to:

- the review of applications for permits, licences, approvals and other authorizations as project development proceeded; and
- the ongoing monitoring, reporting and assessment as the Kemess South project proceeded through construction, operation, dismantling, reclamation and abandonment.

Northumberland Strait Crossing Project

An Environmental Committee (EC) was established by Public Works Canada (PWC) for the Northumberland Strait Crossing Project. This committee was comprised of the project developer and a number of federal and provincial authorities. The EC was responsible for the review and acceptance of the developer's Environmental Management Plan (EMP) and all its components. The EC conducted its work with public involvement. As the Initiating Department, PWC was responsible for ensuring the EMP was implemented by the developer.

Oldman Dam Project

A "Scoping and Follow-up" team/committee was established to assist the Peigan First Nation in determining the issues that require evaluation, management and monitoring during the development of the Oldman Dam. The team/committee consisted of representatives from Indian and Northern Affairs Canada, Department of Fisheries and Oceans, Environment Canada, Health Canada and the Peigan First Nation. The goal of the committee was to draft a "Terms of Reference" that would facilitate the development of a tripartite agreement between the federal and provincial governments and the Paiegan First Nation regarding follow-up (Peigan/Federal Team, 1998).

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7.1.4.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Applicable to all types of EAs. Fully compatible with CEAA and other legislation. • A committee would formalize roles and responsibilities of all parties. • Improves public involvement in decision-making by providing a formal mechanism to address follow-up issues. • Improves communication and agreement building (e.g., avoids potential conflicts). • Use of such committees can be encouraged through internal policy, practices and procedures in each federal department. • Liaison committees have been used successfully in many federal EAs. • Costs of liaison committees could be entirely borne by the proponent. Cost sharing is most likely. • Increased efficiency and 'one window' approach for information on follow-up would likely be seen as positive by federal authorities. 	<ul style="list-style-type: none"> • Not cost effective for most screenings. • Roles and responsibilities of such committees may need to be clarified with respect to decision-making authority of Boards and commissions. • Use of such committees would remain at the discretion of the RA. May require negotiation of Memoranda Of Understandings between departments on a global or project specific basis, and/or the development of appropriate internal policies, rules of practice and procedures to encourage their use and ensure effective operation. • Little experience exists on the effectiveness of liaison committees in designing and implementing follow-up. • Reduced level of control over decision-making and ability of federal authorities to provide expert advice. • Funding for participation by external stakeholders may be required. • Cost recovery regarding the establishment and operation of interdepartmental co-ordinating committees would likely be resisted by proponents and industry.

7.1.5 Compliance Monitoring of RA/FAs Follow-Up Activities

Section 63 (2)(d) of the Act allows the Agency to "examine and from time to time and report to the Minister on the implementation of the environmental assessment process by responsible authorities". This option involves the application of a compliance monitoring framework or approach by the Agency on the status of RA follow-up programs and encourage implementation of follow-up. In this case, the Agency would promote a framework for gathering information and documenting follow-up activities by individual RAs or types of projects. The Agency could "make use of the services and facilities of departments, boards and agencies of the Government of Canada" and encourage the application of its framework in a cooperative fashion (Section 64 of the Act).

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BHP Diamond Mining Project

A liaison or advisory committee that did not include government or regulatory personnel was established for the BHP Diamond Mine. In this case, the proponent of the mine established an independent "Monitoring Agency", consisting of academic, Aboriginal and community members to review the environmental monitoring program on an ongoing basis. This review group was made up of four members with individual expertise in environmental engineering, wildlife, aquatics and ecology; two members from the Aboriginal community; and one from the general public. This group did not include government or regulatory personnel. This Agency was established to:

- provide an independent review of the monitoring program to ensure quality and adequacy of the sampling program;
- specifically review field sampling and laboratory procedures to ensure quality control/assurance;
- tour the Project and conduct an environmental reconnaissance-level field survey once a year; and
- provide an overview report accompanied by an environmental assessment report to be available for review by interested government agencies and the public.

The Agency is currently in the process of designing and testing a "Compliance Monitoring Framework" as a template for federal departments and agencies to use in assessing their compliance with the Act. The framework is based on standardized principles and approaches used to conduct reviews in the federal government, including program evaluation and comprehensive audits. A background report regarding compliance monitoring (David Redmond and Associates, 1998) outlines a variety of ways in which a RA could undertake such audits. The report suggests:

- *program evaluation* be undertaken of the complete EA program every 3 to 5 years (e.g., all EA projects);
- *mid-term reviews* of specific EA components (e.g., implementation of mitigation or compliance with Terms and Conditions) be undertaken every 1 to 3 years; and/or
- *targetted reviews* of specific problem areas be undertaken as required (e.g., follow-up on pipeline crossings, road/bridge projects, dry low-NOx technology at compressor stations).

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This tool does not involve collecting information and evaluating a project's environmental effects (i.e., conducting follow-up), but rather it involves collecting information on the follow-up process to assist an RA in fulfilling its follow-up responsibilities. For example, the current compliance monitoring framework would assist the RA in answering the following questions:

- Was there a clearly stated follow-up policy?
- Did it define the management and EA staff responsibilities?
- Did it provide sufficient practical guidance on how to implement the policy?
- What types of follow-up were conducted?
- At what intervals was follow-up conducted?

This option assumes that implementation of such a compliance monitoring program would be implemented using MOUs or interdepartmental co-ordinating committees. Guidelines and procedures for conducting compliance audits would be developed to support compliance monitoring programs. Compliance monitoring guidelines and procedures would be based on regulations, guidelines or standards regarding follow-up content to provide a benchmark for audit process.

7.1.5.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Applicable to all types of Environmental Assessments, particularly for screenings. • Measures performance with respect to compliance with the Act or federal guidelines, standards. • Supports self-evaluation approach adopted by the Act. • CEAA allows the Agency to "examine and from time to time report to the Minister on the implementation of the environmental assessment process by responsible authorities". • Compliance monitoring may encourage federal authorities to implement follow-up on individual projects and/or take enforcement action. Provides an incentive. • Program evaluation is an accepted tool used across the federal government. • Provides mechanism to improve follow-up practices and procedures. 	<ul style="list-style-type: none"> • Does not assist RA/FA in conducting follow-up. • Effectiveness remains unknown. Centralized audit functions are used throughout the federal government, but have not been applied to the administration of the Act. • Capacity building in federal departments may be required to conduct follow-up audits on highly technical/ scientific projects/issues.

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7.2 Improving the Content of Follow-up Programs

7.2.1 Amending the CEAA and/or Developing Follow-Up Regulations

Section 59(a) of the Act also allows the Governor in Council to make regulations prescribing anything that by the Act, is to be prescribed and generally for carrying out the purposes and provisions of the Act. Therefore, this option involves amending the Act and/or developing follow-up regulations that prescribe among other things a clearer definition of 'follow-up', the nature or content of a follow-up program.

Because of the project-specific and site-specific nature of EAs, a regulation cannot be too prescriptive regarding the technical details of a follow-up program. This view was highlighted in a recent report issued by the AQUAMIN Steering Committee studying the aquatic effects of mining in Canada. Their final report (1996) states that:

"...monitoring programs must be tailored to requirements and priorities at each location to be effective, efficient and ecologically meaningful. This requires that any federal guidelines or regulation setting out an approach to EEM [Environmental Effects Monitoring] must allow for site-specific decisions and must avoid prescriptive detail."

Therefore any follow-up related amendments to the Act or supporting regulation may need to be limited to describing the overall structure of a follow-up program and its mandatory (i.e., minimum requirements) and/or discretionary components (i.e., site specific requirements) regardless of the type of project. Both mandatory and discretionary components could be defined for different types of EAs (i.e., Screenings, Comprehensive Studies, Panels and Mediations).

To provide a better definition of follow-up and assist proponents and RAs in structuring their follow-up activities, the Act could be amended or regulations developed that specify an overall framework or requirements for follow-up and related programs. The amended Act or regulations could also be structured to address the unique challenges facing EA practitioners for projects outside of Canada. For each of the monitoring activities, the Act and/or regulations could specify those items that are either mandatory or discretionary requirements of a follow-up program, including:

- a statement of the objectives of any monitoring programs;
- schedules for collection of data by project phase (e.g., pre-construction, construction, operations, decommissioning and post-closure);
- the subjects and parameters to be monitored, and the criteria/rationale used in the selection;
- frequency and geographic locations/extent of monitoring, and justification of the geographic locations/extent;

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- reporting mechanisms and procedures to follow;
- approaches and methods for monitoring cumulative effects, including the integration of monitoring results with other aspects of the Project or other projects that may contribute to cumulative environmental effects;
- roles of independent experts, government agencies, communities, and renewable resource users in monitoring programs;
- any joint monitoring programs established for the purposes of cumulative effects monitoring;
- procedures and/or performance criteria to assess the accuracy of the EA, the effectiveness of monitoring programs, mitigation measures, and/or to determine the need to implement contingency mitigation measures or remedial actions;
- formal management and administrative information system and structure;
- information recording analysis and retrieval systems, and/or quality assurance/control measures;
- a description of any detailed computer models used to aid in predictions to ensure that the models are credible, appropriately and correctly applied and the documentation of all measurement methods and relevant data to ensure that it is accurate and bias free;
- protocols for documenting, communicating and disseminating information to affected interests; and
- institutional arrangements and capabilities for conducting monitoring outside of Canada.

In addition, the Act could be amended and/or follow-up regulations could be established to empower an RA to:

- collect, claim and administer funds with respect to mitigation and follow-up;
- impose fees to recover costs of administering reviews of follow-up programs;
- impose sanctions/fines in cases of non-compliance; and
- impose reporting requirements (e.g., annual reports to the RA on the status of follow-up programs).

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7.2.1.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Governor In Council has legislative authority to develop regulation(s) regarding follow-up. • The Act/Regulations could be structured to be applicable to all types of EAs, or focused on specific types of EA (e.g., Screenings vs. Comprehensive Studies) and include mandatory and discretionary items for each. • The Act/Regulations would set minimum standard and make it a requirement in the EA process. • The Act/Regulations would likely be effective in improving consistency and quality of follow-up programs by setting up a common framework and minimum requirements for EA documents. • Additional controls on EA process may be seen positively by industry and the public as a measure to improve clarity and certainty regarding EA requirements. • The Act/Regulation could provide an RA with additional authority regarding financial assurances, cost recovery and enforcement measures. 	<ul style="list-style-type: none"> • Legislative changes would required minimum of two to three years to develop and implement. • Regulation was not seen by many Follow-up Subcommittee members as an appropriate mechanism to improve content of follow-up programs, as prescriptive regulations may in fact (depending upon how prescriptive the regulation is) detract from flexibility of an RA/FA and the proponent's ability to innovate. • Costs of developing and implementing regulations is not known. • Legislative amendments and regulations do not necessarily avoid the need for more detailed guidelines/standards, training programs and other tools. • Compliance with overly prescriptive regulations may be difficult for all projects and some proponents. • Compliance with regulations may not be possible for projects outside of Canada, due to types of triggers and nature of project proponents. • Legislative amendments and new regulations increase the risk of court challenges.



DOE's Follow-up Framework

A framework for follow-up programs is already well established among some proponents and EA practitioners. For example, Environment Canada in the Atlantic Region promotes the development of an "Environmental Management Plan" that details how environmental impacts will be minimized or avoided. Such a plan generally consists of a mitigation strategy, environmental protection plan, compliance monitoring program, environmental effects monitoring program, and contingency plan.

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7.2.2 Agency Guidelines or Operational Policies

Section 58 of the Canadian Environmental Assessment Act allows the Minister of Environment to issue guidelines and codes of practice respecting the application of the Act and the regulations. Rather than amending the existing Act or developing new regulations, follow-up related guidelines or operational policies issued by the Canadian Environmental Assessment Agency could provide the needed direction to proponents, federal authorities and Panels regarding the framework or structure of a 'follow-up' program and the nature or content of a follow-up program.

In addition to the items described in Section 7.2.1, Agency guidelines could also be developed for a variety of other aspects of EA that are related to follow-up:

- deciding on the need for follow-up;
- establishing and operating interdepartmental co-ordinating committees or advisory/ liaison committees;
- administering financial assurances; and
- panel recommendations.

Guidelines for Deciding on the Need for Follow-Up

Guidelines or operational policies issued by the Agency or individual departments could specify criteria or a process for determining the need for a follow-up program for screenings, comprehensive studies, panels and mediations. Follow-up may be appropriate for projects with one or more of the following characteristics:

- inadequate baseline environmental information;
- project duration is such that future baseline environmental conditions are uncertain;
- use of new or unproven technology;
- use of new or unproven mitigative measures or application of a proven mitigative measure in a new environmental setting;
- failure of mitigative measures may result in significant environmental effects;
- impact predictions are based on new or unproven assessment techniques or models;
- changes in project scheduling or location that may result in environmental effects;
- there exists a potential for cumulative environmental effects;
- there exists significant public concern; and
- there is scientific disagreement over potential effects.

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Guidelines for Establishing and Operating Committees

Guidelines or Operational Policies could be established to provide guidance to RA staff regarding the conditions for the establishment and effective operation of Interdepartmental Co-ordinating Committees and/or Advisory/Liaison Committees on a project basis. Such guidelines could:

- define the mandate of such committees in the context of follow-up;
- define the circumstances where such committees should be considered. As an example, an RA could be encouraged to establish such an interdepartmental committee for designing and implementing follow-up on all comprehensive studies or Panels. In the case of screenings, this decision could be left to the discretion of the RA. Similarly, an RA could encourage the establishment of an advisory/liaison committee for follow-up in cases where there are significant public concerns, or where an existing liaison committee has been established for the EA of the project;
- define the circumstances under which a federal authority could request that a committee be established and the obligations of the RA to do so. For example, a FA could request that a committee be established where there are significant time pressures to complete the EA review or in cases where there are potentially significant inter-jurisdictional issues to resolve;
- define the role of the Agency in such co-ordinating or liaison committees. For example, the Agency could take on the role of facilitating an interdepartmental co-ordinating committee process as it currently does for Panels, provide expert advice on EA process and the Act;
- define the role of public involvement; and
- define a conflict resolution procedure.

Guidelines for Administering Financial Assurance, Contracts and Agreements

Guidelines or Operational Policies could be established to provide guidance to an RA regarding the administration of financial assurance, contracts and agreement provisions that support follow-up activities. These guidelines could specify:

- the legislative authorities of federal departments;
- principles and definitions;
- activities for which financial assurances, contracts or agreements may be required;
- forms of financial assurances, contracts, agreements and procedures for their administration;
- procedures to determine the value of the financial assurances required;
- the requirements for periodic reviews; and
- responses to defaults.

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Guidelines for Panels

Guidelines or Operational Policies could be established to provide guidance to Agency staff in setting Terms of Reference for Panel and/or to Panels themselves in terms of their roles and responsibilities regarding making follow-up related recommendations. For example, Panel Guidelines could specify that recommendations made by a Panel should:

- be directed to a particular party (i.e., the proponent, a federal authority, a provincial authority);
- be consistent with the mandate of the relevant party to which the recommendation is directed;
- be capable of being translated into Terms and Conditions for federal authorizations, licenses, permits or those of other jurisdictions (where applicable);
- provide a timeframe for implementation;
- specify information and reporting requirements (where applicable); and
- specify consultation and public involvement requirements (where applicable).

7.2.2.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none">• Minister of Environment and the Agency have legislative authority to develop guidelines and operational policies regarding follow-up. No changes to legislation required.• Development and implementation of guidelines/policies can be undertaken more quickly than regulation.• Scope of guidelines/policies could be broad and inclusive to address many follow-up related issues. They can be structured to be applicable to all types of Environmental Assessments and/or focused on specific types of EA (e.g., comprehensive studies).• Guidelines are common, well-accepted tools which formalize current best practice and do not set a minimum standard.• Examples of follow-up guidelines exist in many jurisdictions.• Guidelines/policies would likely be effective in	<ul style="list-style-type: none">• Guidelines and operational policies are not perceived to have the force of law and are not always legally enforceable.• Costs of developing and implementing guidelines/policies is not known, but are anticipated to be less than for legislative amendments or regulations.• Guidelines would not provide an RA with any additional authority regarding financial assurances, cost recovery and enforcement measures. Other legislative changes would be required to address these issues.• Guidelines do not provide a mechanism for capturing, retaining or sharing knowledge gained from EAs.

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Advantages	Disadvantages
<p>improving consistency and quality of follow-up programs by setting up a common framework and setting best practice 'bench mark' for EA documents.</p> <ul style="list-style-type: none"> Guidelines/policies were seen by many Follow-up Subcommittee members as an appropriate mechanism to improve content of follow-up programs, as they are not likely to detract from flexibility of an RA/FA and the proponent's ability to innovate. Additional guidance may be seen positively by industry and the public as a measure to improve clarity and certainty regarding EA requirements. Guidelines/policies can be supported by more detailed guidelines/standards, training programs and other tools. 	

Example from Another Jurisdiction



The United States Army has developed a series of five conditions and requirements that would trigger a need for follow-up, in terms of compliance and environmental effects monitoring. If any of these conditions are met then both compliance and environmental effects monitoring would be required. If none of these conditions are met, then follow-up would be limited to compliance monitoring or enforcement.

- | | |
|-------------------------------------|--|
| 1. Legal Requirements: | • Monitoring is required by-law. |
| 2. Protected Resources: | • Monitoring is required for activities that affect federal or state-listed threatened species, historic sites, wilderness areas wild/scenic rivers and other public or private resources protected by-law |
| 3. Major Environmental Controversy: | • Monitoring must be undertaken for actions or mitigation measures that remain the subject of scientific disagreement of public concern. |
| 4. Unknown Mitigation Outcome: | • The proponent must know if the measure taken was successful, as confirmed by expert opinion. |
| 5. Changed Conditions: | • Alternatives to the environmental setting or to project activities will require preparation of a supplemental impact evaluation and additional monitoring. |

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7.2.3 Departmental Guidelines

Within the context of an overall framework for developing a follow-up program as set out in the Act, new regulation or Agency guideline, more specific or technically-oriented follow-up related guidelines could also be issued by individual or groups of federal authorities. Such guidelines could be developed by several federal and provincial government agencies, with or without the involvement of industry and non-government organizations. The level of detail in these guidelines could vary, but would specify the technical/ scientific and procedural requirements of a department in the design and implementation of follow-up programs for:

- particular types projects (e.g., sectoral guidelines);
- follow-up programs (baseline monitoring, environmental effects monitoring); and/or
- particular types of environmental effects (e.g., water quality).

The main objectives of such departmental guidelines could be to:

- ✓ highlight the importance of follow-up activities in the EA context;
- ✓ consolidate information on applicable federal, provincial and other legislation, regulations and standards;
- ✓ provide definitions for key terms;
- ✓ offer a common and widely accepted reference point on information requirements for the design of various follow-up activities on projects that are subject to the Canadian Environmental Assessment Act;
- ✓ identify alternative/preferred approaches for data-gathering and analysis;
- ✓ recommend alternative/preferred structures and formats for reporting on follow-up programs; and
- ✓ offer, in the appendices, some additional information relevant to the EA and follow-up programs on projects through the presentation of case studies.

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7.2.3.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Federal Authorities have the mandate to develop guidelines and operational policies regarding follow-up. No changes to legislation required. • Development and implementation of guidelines/policies can be undertaken within a short timeframe. • Departmental Guidelines can be developed internally and can level of effort can match available resources and priorities. Alternatively development of guidelines can be delegated. • Many types of guidelines/policies could be developed to address specific follow-up related issues. • Guidelines are common well-accepted tools which formalize current best practice and do not set a minimum standard. • Examples of guidelines exist in many jurisdictions for various project types and sectors. • Guidelines/policies would likely be effective in improving consistency and quality of follow-up programs by setting up a best practice 'bench mark' for EA documents. • Guidelines/policies will improve content of follow-up programs, and would not likely detract from flexibility of an RA/FA and the proponent's ability to innovate. • Potential exists for developing guidelines using a consensus based approach involving all stakeholders on a particular issue. • Additional guidance would be seen positively by industry and the public as a measure to improve clarity and certainty regarding EA requirements. • Guidelines/policies can evolve into more formal standards, protocols or codes of practice in the future once they gain acceptance and are commonly used in practice. 	<ul style="list-style-type: none"> • Guidelines are not perceived to have the force of law and may not always be legally enforceable. • Guidelines prepared by individual departments may result in inconsistent approaches or requirements across federal authorities. • Costs of developing and implementing guidelines is not known and variable depending on scope and consultation requirements. • Changes may be required to some environmental legislation to implement guidelines. • Guidelines do not provide a mechanism for capturing, retaining or sharing knowledge gained from EAs.

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Guiding Principles of Environmental Effects Monitoring

Guiding principles for the development of environmental effects monitoring programs applicable to the mining industry have been proposed (AQUAMIN, 1996). A common set of guiding principles may help establish a consistent set of departmental guidelines. Examples from the mining industry are:

- the objectives of the program must be clearly articulated;
- the program must be scientifically sound;
- the program must be related to pre-operational baseline conditions or conditions on an unimpacted comparable site if proportional baseline conditions do not exist;
- studies should be effective and efficient;
- overlap with other federal and provincial programs should be avoided;

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Guiding Principles of Environmental Effects Monitoring (continued)

- there should be provisions in the reporting framework to harmonize with other programs;
- standards for study design and quality assurance/control measures should be provided;
- the program should be simple but able to detect environmental changes;
- the program should be able to isolate natural spatial and temporal variability;
- the program must provide flexibility for site specific requirements;
- timely and appropriate review and feedback from regulatory agencies is required;
- the reporting framework and frequency of monitoring should be clearly established;
- monitoring should focus on the parameters most likely affected; and
- the program should not be research based.

DOE's Sectoral Environmental Assessment Guidelines

In the Atlantic Region, Environment Canada has developed fact sheets which briefly outline (2 pages or less) environmental assessment considerations related to Environment Canada's expert or specialist knowledge or information. Individual fact sheets are focused on different project types (e.g., roads), project phases (e.g., construction) and environmental issues (e.g., climate change). A combination of these fact sheets may be relevant to a specific project, depending on the nature of the proposal. Environment Canada has developed a fact sheet regarding the components of an "Environmental Management Plan" which includes follow-up considerations. The fact sheets build on Environment Canada's collective experience from participation in previous environmental assessments and are designed to facilitate a better understanding of the Department's responsibilities and potential concerns at the earliest phase of project planning.

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Other Sectoral Guidelines Developed by Environment Canada, NRCan and the Agency

Other federal authorities have been working together to develop a series of sectoral guides for Environmental Assessment. These guides offer a common and widely accepted reference point on EA information requirements and report preparation for various types of projects that are subject to the Canadian Environmental Assessment Act. For example:

- the guide to information requirements for the Environmental Assessment of Pipeline Projects in Canada provides a detailed listing of the typical baseline data requirements and the components of a follow-up program (Gartner Lee Limited for Environment Canada, 1998b).
- the guide to information requirements for coal mines in Canada provides typical monitoring program data requirements for the operation and closure phases of coal mines in Canada (Marbek Resource Consultants for Environment Canada, Natural Resources Canada and the Canadian Environmental Assessment Agency, 1998).

7.2.4 Development of Standards, Codes of Practice or Protocols

Other forms of guidance can be developed and adopted by federal authorities that would assist proponents and federal authorities in follow-up program design and in compliance monitoring. Standards, codes of practice or protocols could evolve from Agency follow-up regulations or guidelines or more technically oriented departmental guidelines, once they have been proven effective and are well accepted by government and industry as "standard" EA practice. Nevertheless, standards are typically developed according to the following principles:

Consensus:..... The views of all stakeholders should be taken into account;

Industry-Wide:..... Standards should satisfy industries and regulators across the country; and

Voluntary:..... Standardization should be based on voluntary involvement of all interests.

The need for a standard is usually expressed by an industry sector, which communicates this need to a federal authority. Once agreement has been reached on which technical aspects are to be covered in the

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standard, the detailed specifications within the standard can be researched and negotiated. This is the consensus-building phase. Final standards could be developed in conjunction with the Canadian Standards Association (CSA) and/or incorporated into regulations to have the force of law. Alternatively, federal authorities could encourage the development of voluntary codes of practice and standards by industry for industry. The United Nations Environment Program for Industry and Environment has developed guidelines for effective voluntary codes of practice and standards (UNEPIE, 1998).

Regardless of the process used in their development, standards or codes of practice could be useful for:

- the design and operation of various mitigative measures (e.g., use of dust suppressants during construction). This would help ensure their effectiveness and assist in decision-making regarding the need for and scope of any monitoring that may be required. For example, if mitigative measures are implemented in accordance with the standard, then they would be considered to be effective and monitoring would not be required;
- baseline and environmental effects monitoring to ensure that the information required for follow-up decision-making is being collected, measured, analyzed and reported on in a consistent fashion; and
- conducting audits of follow-up activities.

The need for standards, codes of practice or protocols for monitoring was identified as a critical issue to Canada's mining industry. For example, one of the recommendations of the Whitehorse Mining Initiative (1994) was:

"For all jurisdictions, establish, standardize and integrate as necessary, credible protocols and programs for data collection and analysis, by means of task forces representing governments, industry, practitioners, researchers and other interested parties."

7.2.4.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none">• Departments can be selective regarding which areas/issue require standards and the level of effort can match available resources and priorities. Alternatively, development of standards can be shared or delegated.• Many types of standards could be developed to	<ul style="list-style-type: none">• Federal Authorities do not all have the mandate to develop standards regarding follow-up.• Development and implementation of standards cannot be undertaken within a short timeframe and are difficult to modify and upgrade quickly.• Standards do not have the force of law and cannot be

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Advantages	Disadvantages
<p>address specific follow-up related issues.</p> <ul style="list-style-type: none"> Standards can be developed that are applicable to multiple jurisdictions. Standards are common, well-accepted tools which formalize current best practices. Examples of standards regarding follow-up exist in many jurisdictions for various project types and sectors. Although standards do not have the force of law and cannot be legally enforced on their own, they are enforceable when specifically referenced within Terms and Conditions of an approval. Standards would likely be effective in improving consistency and quality of follow-up programs by setting up a best practice 'bench mark' for EA documents. Standards will be effective in improving the content of follow-up programs Potential exists for developing standards using a consensus based approach involving all stakeholders on a particular issue. Appropriate standards may be seen positively by industry as clearly setting out requirements regarding aspects of follow-up. Compatible with Environmental Management System (ISO 14000) and voluntary approaches to compliance. Standard setting provides opportunities for accreditation and certification programs. 	<p>legally enforced on their own.</p> <ul style="list-style-type: none"> Broad based standards may not meet the individual needs of all federal authorities. Costs of developing and implementing guidelines are not known and variable depending on scope and consultation requirements. Changes may be required to some environmental legislation to implement standards with the force of law. Standards would likely detract from flexibility of an RA/FA and the proponent's ability to innovate. Standards often result in increased costs to industry. In the absence of regulation or government guidelines, third-party standards may be perceived by the public as being less enforceable and effective.



A National Standard for Environmental Assessment

The Canadian Environmental Assessment Agency has initiated the development of a National EA standard. Initial discussions are underway with the Canadian Standards Association who have established a Technical Committee on Environmental Impact Assessment comprised of academics/consultants, non-government organizations, industry and government representatives. The goal of this effort is to develop a standard that could meet the needs of other statutory and non-statutory processes in Canada and provide consistent, reliable and best practice procedures that will be at least consistent with the Canadian Environmental Assessment Act. They will be sufficiently generic to be applied within the context of other Canadian EA practices.

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7.2.5 Follow-Up Related Tools to Improve Practices/Procedures

Other forms of guidance can be developed and adopted by federal authorities that do not have the weight of a regulation or standard. These are tools that are developed by the Agency, centralized and available for use by all federal authorities, or developed by each FA to suit their own purposes. These tools would be useful to a broad range of participants in the EA process:

- for project proponents – both management and EA practitioners – knowledge of basic information requirements, examples of various types of mitigation and monitoring programs will allow for better project planning/design, research and consultation activities;
- for federal departments or agencies responsible for ensuring that an environmental assessment is carried out, and for independent panels appointed to conduct environmental assessment hearings, these tools can offer a consistent foundation for the review of projects and the development of detailed project-specific recommendations; and
- for biophysical and social scientists who conduct assessments, for officials who must have assessments done, and for anyone who wants to comment on or intervene in an EA process, these tools can provide useful techniques and a basis for judging whether an EA has addressed all the appropriate issues and that state-of-the-art mitigation and monitoring approaches are being used.

Standardized forms and checklists could be developed and/or approved by the Agency to provide consistency in various aspects relating to follow-up. Forms and checklists could assist in ensuring that:

- decisions regarding the need for follow-up are being made and documented according to specified criteria; that screening forms and EA reports contain the mandatory information specified in guidelines, standards etc.;
- the follow-up audits examine critical information; and
- that RA/FA staff document their follow-up activities.

Best practice guides and manuals can be developed and published by the Agency or individual federal authorities on a wide variety of topics relating to follow-up, including design and implementation of mitigation measures, monitoring studies, analysis/evaluation techniques etc. To this end, the Agency could play a significant role in consolidating this information from across the federal government and elsewhere.

Computerized screening/assessment tools or expert systems could assist with the standardization of environmental screenings, identification of relevant mitigation measures and follow-up activities. Such

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automated software would build consistency and reliability into the EA process, while providing traceable results and/or a useful mechanism for training personnel in the assessment process. The Agency could provide advice/guidance towards their development or certify them.

Computerized project tracking / search tools that allow an RA to keep track of projects under review and ongoing follow-up activities at any given time, and their associated deadlines or required actions. They could also be used to produce summaries of projects and follow-up requirements, as well as project summary forms which can be sent to internal staff and other federal authorities when their input is solicited. The Agency could play an important role in ensuring consistency of such tools across the federal government.

Customized department intranets/databases that allow all staff within a federal department access to information and resources such as case examples, databases, literature reviews and bibliographies. Internet links could be further established to information sources on the world-wide web or web pages of other departments, industry associations and non-government organizations.

Reporting/communications mechanisms such as EA focused newsletters, periodic reports (annual program summaries), follow-up presentations/workshops, departmental home pages/web-sites could be developed to facilitate the sharing of research and other follow-up information among federal government staff involved in EA; communicating precedents and legal case law related to follow-up; and reporting of follow-up activities to the Agency on a project or program specific basis.

7.2.5.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Tools can be developed to address/target a wide variety of issues and match the resources and priorities of individual departments. • No effects on legislation or regulation are anticipated. • All stakeholders in the EA process can benefit from development of guides, manuals, computerized screening/assessment tools, etc. • Will improve sharing and retention of knowledge. • Various tools can be developed quickly and efficiently. • Costs will vary depending upon the specific tool. Sharing of existing tools, development and training costs among federal authorities is possible. • Cost recovery for development of some tools (e.g., CD ROMs, manuals etc.) is possible. 	<ul style="list-style-type: none"> • Follow-up related tools support the implementation of other options and will not serve to improve follow-up on their own. • Needs for specific tools are not well defined. • Inconsistency and inefficiencies are likely if common tools and approach are not developed (e.g., public registries) • Effectiveness of each tool will vary, but will depend on its quality, and training provided in its use. • Costs will vary depending upon the specific tool. • Guides, manuals and computerized assessment tools can become quickly outdated. Access to new technology may not be possible for all departments/staff.

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Environment Canada's Computerized Project Tracking Tool

TRACKER is a database developed by Environment Canada, which allows the Environmental Assessment Section to quickly determine on an as needed basis which reviews are active, when they are due and who has made the request. TRACKER also allows quick access to the Section's hard copy information for verification. The database is also invaluable for preparing quarterly and annual reports on the Department's Environmental Assessment review activity.

Atlantic Canada Opportunities Agency Follow-up Report Guide

Public Works and Government Services on behalf of the Atlantic Canada Opportunities Agency (ACOA) has developed a standard guide for preparing follow-up reports. The guide includes a checklist for determining the need for follow-up and presents a table for completion during the project, that allows for all relevant EA commitments to be tracked and the effects of the project on the environment to be evaluated.

Guides and Manuals in Other Jurisdictions

Australia's Environmental Protection Agency has developed a set of guides that outline the best practices for environmental monitoring and performance in the mining sector. Their guide sets out the guiding principles for environmental monitoring, and best practices for the planning/design, implementation and reporting on environmental monitoring programs. Case studies provide illustrative examples (Environmental Protection Agency, 1995).

Hong Kong's Environmental Protection Department has developed a Generic Environmental Monitoring and Audit Manual and recently made its provisions legal requirements under their Environmental Impact Assessment legislation. The manual outlines: the duties of the proponent with respect to monitoring and auditing and information requirements with respect to project organization and scheduling of construction activities, and mitigation measures. Standards are set for baseline and effects monitoring programs are specified for air quality, noise, water quality and waste management (e.g., parameters, equipment, measurement/analysis, monitoring locations).

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Guides and Manuals in Other Jurisdictions (continued)

Plans are required which detail notification and contingency actions for exceedances. The manual also specifies the reporting requirements (i.e., content, structure, timing and data keeping) for a baseline monitoring report and environmental effects monitoring and audit reports. Sample templates for data records are provided (Government of Hong Kong, Environmental Protection Department, 1996).

The World Bank has also issued 'Sectoral Guidelines' which describe in general, the potential environmental effects/issues, mitigation measures and monitoring requirements for various types of projects funded by the Bank.

7.2.6 Improving Public Registries / Federal Environmental Assessment Index

This option involves improving the structure, use and accessibility of the Public Registries of individual federal departments and the Federal Environmental Assessment Index to allow for these tools to better to capture, share and retain knowledge gained from environmental assessments and follow-up programs. There are many ways that this could be accomplished. Some of these are:

1. Standardizing the format of the public registries of all federal departments and agencies to improve consistency. The Canadian Environmental Assessment Agency would take the lead in developing a standardized registry linked to an expanded FEAI and consistent with any new regulations or guidelines.
2. Ensuring that public registries are capable of conducting searches through queries and summarizing EA related data to facilitate information retrieval and audits;
3. Linking the public registries of all federal departments and agencies with the FEAI electronically through the internet;
4. Making the screening reports or the contents of public registries of all federal departments and agencies more accessible to members of the public electronically through the internet; and

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5. Ensure that an appropriate level of detail regarding the EA and follow-up program are included in the public registry forms and the FEAI. The types of information that could be considered for inclusion in the registry are:
- the decision regarding the need for a follow-up program and its rationale;
 - terms and conditions contained in authorizations, licenses and permits;
 - the components of the proposed follow-up program;
 - project officers responsible for implementing follow-up;
 - schedule/status of follow-up activities; and
 - posting of follow-up related information such as follow-up agreements, contracts, annual monitoring reports, audit findings, etc.

This option assumes that training of EA staff within federal departments would be provided to support new systems.

7.2.6.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Applicable to all types of Environmental Assessments and all federal authorities. • Enhances the ability to capture, share and retain knowledge gained from environmental assessments. • Enhances the ability to transfer critical project related information between EA and enforcement staff over the life of the project. • Standardization may provide greater consistency across federal government and facilitates training and compliance monitoring/auditing. • Serves to improve public access to information and involvement in EAs. • Fully compatible with CEAA and other legislation. • Improvements to FEAI can proceed immediately. No time lag anticipated. • Improved access to information may facilitate public involvement and improve quality of EA (if used by proponents as a research tool). 	<ul style="list-style-type: none"> • Standardization of federal department public registries may require additional consultation and development of appropriate/common input format useful to all departments. • Effectiveness of public registries as a tool to capture, share and retain knowledge is dependent upon the degree to which information is inputted and search/reporting capabilities. • Standardization may reduce customization of registries to meet individual department needs. • Investments by some federal authorities in public registry development may be lost. Additional costs would be incurred in developing and implementing new standardized registry. • Availability of more detailed information on public registries may expose inconsistencies in application of guidelines and standards among federal reviewers.

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7.2.7 Development and Delivery of Training Programs

Training will be required regardless of the actions taken to improve follow-up. It should be an essential component of all EA activities and programs. Government and the private sector are putting more emphasis on environmental training within their organizations. The motivation for conducting training varies, but most often it is conducted to raise environmental awareness and enhance skills in an effort to improve performance and to fulfill their mandates or corporate policies objectives.

- **Agency sponsored training** will need to be conducted for any new regulations, operational policy or guideline issued regarding follow-up.
- **Department sponsored training** would also need to be undertaken for any other forms of guidance (e.g., standards, tools, codes of practice/procedures) that are developed by an individual department for their own specific uses.
- **Industry sponsored training** could be undertaken for standards or codes of practice/procedures that are developed for a specific type of project or sector.

The basis for the design of an effective training program is an understanding of intended audience and its needs. A needs assessment can help tailor training programs to the specific requirements of the organization, paying close attention to:

- the type of audience;
- training objectives of the organization (i.e., course focus);
- scope and level of detail;
- timing;
- participant cost;
- desired training approaches;
- unique cultural requirements; and
- method of delivery.

In conjunction with the needs assessment and course design process, the organization responsible for a particular training program would need to review course delivery options and make decisions regarding potential venues and partners. Some delivery options include:

- course delivery through workshops, seminars and conferences co-ordinated by internal staff or by an external organization (e.g., industry association, CSA, etc.);
- delivery through 'distance education' using teleconferencing; and/or internet/intranet technology;

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- delivery through integration within the curriculum of an existing educational institution (e.g., community college or university) potentially leading to formal certification or accreditation; and
- delivery through the establishment of a new educational institution / centre of excellence potentially leading to formal certification or accreditation.

A mix of teaching materials and formats to facilitate and enhance the learning experience are possible, including:

- computer programs;
- training manuals and readings;
- physical models and demonstrations;
- videos and slides; and
- CD ROM.

7.2.7.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Training programs can be developed to address/ target a wide variety of issues and match the resources and priorities of individual departments. • No effects on legislation or regulation are anticipated. • All stakeholders in the EA process can benefit from training. • Various types of training programs can be developed and delivered quickly and efficiently. • Costs will vary depending upon the specific training program. Sharing of training costs among federal authorities and with industry/academic community is possible. • Cost recovery for some training programs is possible. 	<ul style="list-style-type: none"> • Follow-up related training programs support the implementation of other options and will not serve to improve follow-up on their own. • Needs for specific training programs are not well defined and partially dependent on the implementation of other options/tools. • Inconsistency and inefficiencies are likely if common training programs and approaches are not developed. • Effectiveness of each training program will vary. • Implementation of national or sustained training programs will require dedicated staff and funding. • Costs will vary depending upon the specific training program. Training using emerging technologies may be cost prohibitive.

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7.3 Improving Permitting and Enforcement

7.3.1 Inclusion of Follow-Up Related Conditions in Relevant Authorizations, Licenses, Permits and Approvals

Standard or Generic Terms and Conditions

The development of standard or generic terms and conditions regarding follow-up that could be included in any authorizations, licenses, permits and approvals granted by an RA and would be applicable regardless of the project.

Standard or generic terms and conditions would be most applicable when follow-up requirements are clearly stipulated in regulations, guidelines or standards etc. For example, a standard term or condition could read "*The proponent will ensure that the design and implementation of its follow-up program conforms with Regulation X.*" Standard or generic terms and conditions could also be developed for classes of screenings regarding effects monitoring and reporting requirements.

Project Specific Terms and Conditions

Project specific terms and conditions regarding follow-up could be integrated directly into the authorizations, licenses, permits and approvals granted by a Responsible Authority. Alternatively, an 'addendum' could be developed that clearly differentiates terms and conditions specified by the RA from those of other federal authorities or jurisdictions.

These terms and conditions have been typically restricted to the mandate of the RA under their enabling legislation. However, permits could also include terms and conditions of other FAs (e.g., inclusion of DOE terms and conditions on a Fisheries Act Authorization or a Navigable Waters Protection Act approval). These are referred to as '*extra-statutory conditions*'. The authority to include extra-statutory conditions derives from the concept of super-added duty and power to meet ones supplemental duties under the Act. An RA may enforce their regulatory actions in whatever way is provided for in their enabling legislation, regardless of whether extra-statutory conditions have been included in a regulatory permit. Where a permit condition involves a matter also regulated by another federal regulatory statute, then the enforcement provisions under that statute may also be triggered.

Given that it is the responsibility of the RA to determine whether to grant an authorization, license or permit in light of the environmental information obtained through the EA process, and to attach such conditions as are necessary to give effect to all concerns whether within its own mandate or not, it is entirely consistent that it is also the RAs responsibility to ensure that such permit conditions are respected. However, it is the regulating department (RA or FA) that is responsible for *enforcement* of its own legislation regardless of how it has been treated within the permitting process.

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Finally, there is potential for some RAs to include the terms and conditions specified in other approvals (e.g., provincial or territorial government approvals). For example, some legislation (e.g., Nuclear Safety and Control Act) may allow for incorporation of an Act or instrument of another jurisdiction. Thus, any person who contravenes a provision of the incorporated Act or instrument would be guilty of an offence made under both Acts (federal and provincial). However, it is the federal or provincial regulating department that would remain responsible for taking *enforcement action* with respect to its own legislation.

Overall, follow-up related terms and conditions specified in authorizations, licenses, permits and approvals should:

- be imperative (i.e., using verbs such as shall, will or must);
- address as far as possible, a specific and identifiable concern;
- provide for clear deadlines to be met;
- deadlines should be made taking into account the environmental effect or mitigation measure to be addressed;
- if plans are required to be developed by the proponent (e.g., monitoring plans), the terms and conditions should specify any requirements for these plans to be completed and submitted to the RA and/or other relevant FAs for informal approval prior to implementation; and
- reference to guidelines, standards, codes of practice and/or other legislation (federal or provincial) must clearly identify the most relevant document(s).

7.3.1.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none">• Applicable to all types of assessments. Standard or generic terms and conditions most applicable to classes of projects, screenings or standard requirements of an individual department.• No changes to legislation or regulations required.• Implementation can occur immediately. Staff awareness and senior management support is required for effective implementation.• Standard or generic terms and conditions may improve consistency and efficiency of permitting process.• Inclusion of follow-up related terms and conditions	<ul style="list-style-type: none">• Not applicable to EA conducted as a result of a funding / and trigger or for projects outside of Canada (e.g., CIDA projects).• Increases the need for interdepartmental co-ordination of EA review, permitting and enforcement activities.• Without regulation, there is no incentive for RA to agree to include the terms/conditions of other FAs. Agreements/Memorandum of Understanding may be required among federal departments to provide incentive.

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Advantages	Disadvantages
<ul style="list-style-type: none">will increase likelihood of compliance by proponents, and improves enforceability of follow-up commitments contained in EAs.• Several precedents and many examples from other jurisdictions exist.• May indirectly result in improved interdepartmental co-ordination/communication during EA and permitting stages.• No significant cost implications.	<ul style="list-style-type: none">• Effectiveness is dependent upon ability and willingness to enforce terms and conditions.• Roles and responsibilities for permitting and enforcement of conditions of approval will become blurred and confusing. One department will not take on responsibilities of another without compensation.• Increases cost of enforcement for RA/FA involved.• Industry may perceive this as an additional regulatory/ compliance burden.



Cheviot Coal Mine Project Approvals

In August 1998, The Department of Fisheries and Oceans, as the RA, issued Authorizations under the Fisheries Act to the proponent (i.e., Cardinal River Coals Limited) for the development of the Cheviot Coal Mine and access corridor. In addition to fisheries issues, these authorizations contained terms and conditions regarding migratory birds to satisfy Department of the Environment concerns.

7.3.2 Development of an 'Umbrella' Approval for Follow-Up Issues

There is currently no regulatory authority in the CEAA to "ensure" that a proponent implements project specific follow-up commitments. Therefore, this option involves the development of a formal approval mechanism to ensure that the follow-up commitments contained in the EA or subsequent documentation are enforceable. This would require the development of an 'umbrella' approval for follow-up issues.

All responsible authorities could be empowered to grant a follow-up 'Certificate of Approval' instead of, or in addition to, the authorization, permit or license granted under their own enabling legislation. This certificate would include terms and conditions to ensure all follow-up related commitments made in the EA which are beyond the mandate of the RA are enforceable.

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7.3.2.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Applicable to all types of assessments. • Umbrella approval will increase likelihood of compliance by proponents, and improves enforceability of follow-up commitments contained in EAs. • May indirectly result in improved interdepartmental and interjurisdictional co-ordination/communication during EA and permitting stages. • May strengthen the role of the RA, Minister of the Environment and/or the Agency in permitting and enforcement activities (depending upon who is authorized to grant approval for the follow-up program). 	<ul style="list-style-type: none"> • Changes to CEAA, other legislation or regulations will be required. May require two to three years to implement. • No precedents exist in the federal government. Examples from other jurisdictions exist. • Increases the need for interdepartmental co-ordination of EA review, permitting and enforcement activities. • New process would be disruptive to existing EA process and established practices within federal departments. • Granting authority for approval of a follow-up program to a FA other than the RA may result in conflict in situations where one permit is granted by the RA but the follow-up 'umbrella' approval is withheld. • Effectiveness is dependent upon ability and willingness to enforce terms and conditions. • Roles and responsibilities for permitting and enforcement of conditions of approval will become blurred and confusing. • Increases cost of enforcement for RA/FA involved. • Industry may perceive this as an additional regulatory/compliance burden.

7.3.3 Expanded Use of Financial Assurances

Financial Assurances are mechanisms that could be used by an RA to ensure that private sector proponents, owners or operators of approved projects maintain specific financial arrangements to pay for follow-up activities they have committed to in their EA or other authorizations. Financial assurances are used by many provincial and some federal government regulatory bodies to ensure monitoring, mitigation, contingencies and decommissioning activities can be carried out. Financial assurances could help ensure that the proponent cannot default on their commitments to conduct follow-up activities and will allow the federal government the ability to claim monies and complete the required follow-up. This option involves the development of regulatory mechanisms to require project proponents to provide financial assurances to an RA or FA and provide the RA or FA with various authorities to collect, claim and administer funds with respect to mitigation and follow-up. There are various ways to gain financial assurances. Some examples are discussed below.

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1. An applicant could pay monies (cash or cheque) to the RA/FA or an agent acceptable to it, prior to an authorization, license or permit being issued. The amount paid would (with interest earned) be equal to the amount of estimated follow-up costs over a specified time period. Term deposits which would earn interest over time can be used to ensure sufficient funds are available for follow-up activities well in the future. The applicant could either draw on the fund to undertake the required follow-up activities, or the RA/FA would be empowered to do so. A discounted amount would be deposited so that, with interest, the required funds will be available. The amount of monies available would vary throughout the life of the project (i.e., scaled up or down to match the needs during a particular project phase).
2. Bonding is a common tool used by regulatory agencies across Canada, whereby the applicant arranges for a security bond. A bond agreement would indicate that in the event that the applicant is unable to pay for follow-up, the a security company would pay the RA/FA the costs of undertaking the required measures. Provincial or Government of Canada Bonds, purchased at a discount from face value could also be purchased in the name of the RA. The RA would stipulate acceptable interest rates for discounting purposes.
3. Proponents could be required to acquire insurance to cover the costs of undertaking corrective or remedial actions should mitigation measures initially implemented be ineffective. Insurance companies would pay the RA/FA, if the applicant is unable to carry out the required corrective or remedial actions.
4. Another type of financial assurance available is obtaining a director's guarantee. This tool involves a director, officer or owner of an applicant, providing the RA/FA or an agent acceptable to it, a signed personal guarantee supported by a statement of personal net worth that would indicate that the individuals would use their own funds to pay for follow-up costs if the corporate applicant was unable to. Such a guarantee would be irrevocable and unconditional so that it could not be withdrawn or the terms changed.
5. In some cases, promissory notes may be useful. This involves a legally binding contract between the applicant and the RA/FA to pay a specific amount of money at any time demanded by the RA/FA. Promissory notes can be for amounts equal to the estimated costs of specific follow-up activities, that may or may not be implemented in the future. Letters of credit from an applicants bank/financial institution could also be used.

The requirement to post a bond or carry insurance could be cancelled should the mitigation prove to be effective. In these case, follow-up activities aimed at verifying the effectiveness of mitigation could be

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required prior to cancellation of the insurance plan or return of monies held in trust. Financial assurances could also be established which tie environmental standards into the criteria used to determine funding payout rates.

7.3.3.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> Financial assurances would ensure that proponents conduct and pay for follow-up. Financial assurances would assist in enforcement of follow-up for EAs triggered by provision of federal funding/land (e.g., international projects). Financial assurances could help fund follow-up audits by another FA or independent third parties. Some federal authorities may expand use of financial assurances immediately. Financial assurances have proven to be effective in most jurisdictions. Those with experience in using financial assurances include: Atomic Energy Control Board, National Energy Board. Provision of financial assurances may be familiar to some proponents and the additional certainty may be viewed positively by the public. 	<ul style="list-style-type: none"> Financial assurances may only apply to private sector proponents. Not applicable to EA conducted for most aid projects outside of Canada (e.g., CIDA projects). Administration of financial assurances may be cost prohibitive on all screenings. CEAA does not contain any provisions for a RA to collect, claim and administer funds relating to an EA. Compatibility with other legislation remains uncertain. Some legislation allows for financial assurances (e.g., Nuclear Safety and Control Act), while others may not. The availability of funds does not guarantee effective follow-up program design or implementation. Administrative systems will need to be established to collect, claim and administer funds relating to an EA. Proponents and industry will likely resist additional costs and controls to project development. Financial assurance requirements may prevent some proponents from "market entry" or reduce their competitiveness domestically or internationally. Financial assurances may not be appropriate for use with First Nations or foreign organizations. Financial assurances may need to be implemented within the context of staged approval to be effective.

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Examples of the Use of Financial Assurances

The Nuclear Safety and Control Act allows the Canadian Nuclear Safety Commission to issue licenses that contain conditions that may require an applicant to provide financial guarantees in a form that is acceptable to the Commission.

Agriculture and Agri-Food Canada (AAFC) commonly puts provisions in contracts for compliance purposes so that payment of contribution funds can be held back until conditions are met. In addition, there are clauses for auditing projects and reclaiming misused or unused funding.

7.3.4 Agreements, Contracts Between RA/FAs, Project Proponents and Other Stakeholders

The establishment of legally binding agreements and/or contracts between key stakeholders (e.g., RA/FA, proponents, Provincial Government Agencies and First Nations) can provide an important mechanism for ensuring that follow-up issues are addressed. This mechanism can also be applied in the context of international aid projects, where funds are provided to foreign governments or aid agencies. These agreements can be used for various purposes, including:

- clarify the terms and conditions contained in formal authorizations, permits and licenses by providing additional information or detail;
- supplement the terms and conditions contained in formal authorizations, permits and licenses by imposing additional requirements on the proponent;
- clarify the roles and responsibilities of stakeholders in the implementation of follow-up programs, particularly in multi-jurisdictional EAs; and
- provide a broad framework within which mitigation measures and follow-up programs can be developed in the future.

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7.3.4.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Applicable to all types of assessments. • No changes to legislation or regulations required. • Implementation can occur immediately. Staff awareness and senior management support is required for effective implementation. • Agreements and contracts will increase likelihood of compliance by proponents, and improves enforceability of follow-up commitments contained in EAs. • Proven to be effective. Several precedents and many examples from other jurisdictions exist. • May be useful as a supplementary enforcement tool to address an RAs super added authority. • May indirectly result in improved interdepartmental and interjurisdictional co-ordination/communication during EA and permitting stages. • Roles and responsibilities for permitting and enforcement of conditions of approval will be clarified. • Industry familiar with contract negotiation process and may be more receptive to non-regulatory measures. • Potential exists for involvement of the public in negotiation of agreements. • Contracts may provide alternative mechanism to imposing a fine or sanction. 	<ul style="list-style-type: none"> • Agreements may increase the need for inter-departmental and interjurisdictional co-ordination of EA review, permitting and enforcement activities. • Effectiveness is dependent upon ability and willingness to enforce terms and conditions of contract, particularly through litigation. • Enforcement of agreement/contract provisions through litigation may not be possible or appropriate with First Nations or foreign organizations. • Increases cost of enforcement. Litigation is expensive. • Contract and agreement negotiation can be cost prohibitive for screenings and will be costly for comprehensive studies and Panels

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The Musselwhite Agreement

The key institutional arrangements relating to follow-up on the Musselwhite Mine Project were a set of development agreements. The Musselwhite Agreement (i.e., the general agreement) provided commitments to mitigation measures and a framework to address First Nation concerns. The parties to the General Agreement included several First Nations Councils, the project proponent and the governments of Canada and Ontario. The agreement sets out implementation mechanisms along with the necessary financial support to see implementation of follow-up commitments through to project completion. There is also a provision for an independent evaluation of the agreement's implementation.

BHP Diamonds Project Environmental Agreement

The 'Environmental Agreement' negotiated between BHP Diamonds Inc., the Government of Canada and the Government of the Northwest Territories established an "Monitoring Agency" with a broad mandate to review, report or make recommendations concerning follow-up. The "Monitoring Agency" was also mandated to provide an accessible and public repository of environmental data, studies and reports relevant to the Agency's mandate and provide an effective means to bring to BHP and governments the concerns of aboriginal peoples and the public about the project and its monitoring and regulation. The Agreement also outlines BHP's responsibilities for compliance and environmental effects monitoring of the project as part of its Environmental Management Plan.

Northumberland Strait Crossing Project Contract

Public Works Canada (i.e., the initiating department under the Environmental Assessment and Review Process (EARP) and the project proponent) developed the initial requirements for an Environmental Management Plan which later became part of a project specific tender or proposal call whose resultant contract was legally binding on the developer. The contract is administered by Public Works through an Environment Committee comprised of the project developer, Fisheries and Oceans Canada, Environment Canada and relevant provincial ministries of the environment.

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7.3.5 Staged Approvals and/or Progressive Funding

This option involves the development of regulatory instruments, practices or procedures within federal departments that allow an RA to issue its authorizations, licenses and permits for a project in a staged manner and/or provide funding in a progressive or staged manner. Although these measures are currently being used by many federal authorities, they have not been effectively applied to the problems/issues relating to follow-up. Moreover, some federal authorities' approval processes may not be structured to allow for staged approvals or progressive funding arrangements. Staged approvals and progressive funding arrangements can provide opportunities to revisit terms and conditions of approval, funding or lease agreements to suit actual or foreseeable conditions.

7.3.5.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none">• Staged authorization would ensure that the follow-up program is designed using the most up-to-date information and technologies and/or is modified to suit current environmental conditions.• Some federal authorities may expand use of staged authorizations immediately.• Staged authorizations have proven to be effective in most jurisdictions. Those with experience in the federal government include: Atomic Energy Control Board and the National Energy Board.• Financial assurances may need to be implemented within the context of staged approval to be effective.	<ul style="list-style-type: none">• Not applicable to most EAs or EA triggers.• Additional administration of staged authorizations may not be cost-effective for some projects.• Some legislation allows for staged authorizations (e.g., Nuclear Safety and Control Act), while others may not. Some legislation may need to be changed for an FA to take advantage of this option.• Proponents and industry will likely resist additional costs and controls to project development.• Staged authorizations may encourage project 'splitting' which may result in incomplete EA of projects over their complete lifecycle.• Some proponents may be encouraged to 'walk away' from a project, leaving the federal government with some liabilities. Sanctions would need to be developed that suit the nature of the infraction.

7.3.6 Conducting Follow-up Evaluations of Projects

Under Section 38(1), it is a RA's obligation, in accordance with any regulations made for that purpose, design any follow-up program that it considers appropriate for the project and *arrange for the implementation* of that program. Follow-up can be undertaken on a project-by-project basis or on a program basis, through the implementation of a follow-up evaluation. A follow-up evaluation can be

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completed to support or provide input to the compliance monitoring activities identified in 7.1.5 and would involve actively collecting and evaluating information supplied by the proponent, other federal, provincial and territorial government agencies to assist in:

- assessing any changes in the environmental legislation that may affect the project;
- determining the ongoing effectiveness of compliance with environmental legislation;
- determining the ongoing effectiveness of mitigation;
- assessing the need for any additional mitigation;
- determining the effectiveness of management with respect to environmental matters;
and
- making recommendations for improved environmental efficiency where necessary.

Project specific evaluations could be undertaken by an RA or delegated to a third party such as:

- an independent expert;
- industry association;
- a public advisory / liaison committee; or
- the Canadian Environmental Assessment Agency.

Evaluations could also be undertaken periodically on a program basis. This option involves the application of a compliance monitoring framework to gather information, evaluate and document the results of follow-up activities conducted for ongoing projects. Using an approach similar to the compliance monitoring program, federal authorities could undertake their follow-up data gathering and evaluation activities in a co-ordinated fashion. In such a case, one FA would likely take the lead in developing and co-ordinating the program to suit its internal objectives and priorities, or to support development of specific guidelines, standards and procedures.

Delegation of responsibilities for undertaking project/program specific evaluations would involve the transfer of responsibilities from an RA to internal evaluators or an external organization on a case by case basis and the application of a common framework to ensure consistency in implementing the evaluation. Memoranda of Understanding or other formal agreements would need to be negotiated between all parties involved in the evaluation to define roles and responsibilities. This option assumes that guidelines, standards and/or procedures for conducting follow-up evaluation will be developed and those completing the evaluations are fully trained.

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7.3.6.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Applicable to all types of Environmental Assessments. Fully compatible with CEAA and other legislation. • Facilitates information gathering and sharing among EA practitioners through improved reporting on the results of follow-up. May serve to improve follow-up program design and content over the long term. • Program evaluations may be cost effective for most screenings, class screenings and some international projects; • Programs can be designed to match departmental priorities and resources. • Common framework or approach can improve consistency in implementing follow-up across federal departments. • Evaluations of individual projects can be implemented immediately on new projects. No time lag. • Follow-up evaluations on individual project basis is most effective tool and may motivate proponents to improve compliance. • Evaluations of individual projects could be delegated to liaison committees. • Follow-up evaluations aimed at determining the effectiveness of mitigation may serve to improve environmental quality and provide information into the development of guidelines and standards. • Training and/or certification of evaluators may be desirable 	<ul style="list-style-type: none"> • Individual evaluations are costly and time consuming. Not cost effective for most screenings or international projects (e.g., CIDA funded projects) • Cost recovery for conducting follow-up evaluations of individual projects would likely be resisted by proponents and industry. Cost recovery for some international projects may not be possible (e.g., international aid projects). • Effectiveness can vary depending upon the evaluation process used and skills of the evaluators. • Evaluations will likely require co-ordination among, and participation of other jurisdictions (particularly in cases of compliance with Terms and Conditions). Priorities and resources of stakeholders may be mismatched. • Program evaluations cannot be implemented immediately on new projects and may require interdepartmental MOUs or implementation through regulation. • Program level evaluations may require dedicated resources and staff with both technical and evaluation skills. • Effectiveness of follow-up using a compliance monitoring framework is unknown. Current pilot projects will assist with this evaluation. • Some programs may be seen as research. Industry and proponents do not feel it is their responsibility to fund research on the effectiveness of mitigation. • Follow-up evaluations on a program basis may not assist in enforcement on individual projects. • Industry and proponents may not understand relationship between a follow-up evaluations, compliance audits and enforcement actions. • Follow-up evaluations may or may not involve the public.

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Huckleberry Mine Project

Since granting project approval to the Huckleberry Mine Project, DFO has conducted several on-site inspections of the mine development and solicited information from various British Columbia ministries, Environment Canada and Huckleberry Mines Ltd. in 1996 and 1997 to determine if the mitigation measures detailed in the environmental assessment were implemented. DFO prepared a "Follow-up Report" (MacDonald, 1998) containing:

- a summary of all mitigation measures detailed in the Comprehensive Study Report;
- the status of the mitigation measures;
- specific recommendations for implementation of those measures; and
- general recommendations that relate to the process of completing follow-up reports and project monitoring.

7.3.7 Expanded Use Environmental Inspectors

Follow-up related terms and conditions, agreements or contracts could include provisions for the hiring of a third-party environmental inspector to assist FAs (and others) in fulfilling their follow-up responsibilities. RA/FAs could recommend that a qualified environmental supervisor be assigned or hired by the proponent to ensure that all necessary environmental requirements are addressed during various stages of project development or to identify if/when a project specific follow-up evaluation may be required. This person(s) could also be independent of the contractor and a qualified environmental specialist in a relevant environmental discipline (e.g., fisheries).

The primary responsibility of an environmental inspector would be to monitor the contractor's activities for legislative compliance and adherence with permitting conditions to ensure that the EA recommendations for mitigation and monitoring are implemented and effective, and report findings to relevant regulatory authorities and stakeholders. In addition, the environmental inspector could be charged with the responsibility to peer review the proponents effects monitoring results and/or co-ordinate the collection, evaluation and reporting on the effects of the project on the environment. A legal mechanism would need to be developed to empower such inspectors with the ability to issue verbal warnings/directions, tickets/fines and other sanctions (e.g., stop-work orders) and/or make recommendations regarding revoking or amending licenses and permits.

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7.3.7.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Use of environmental inspectors would provide regular surveillance of proponent's activities at minimal cost to the RA. • Potentially applicable to all projects at the discretion of the RA. May be appropriate tool for projects outside of Canada where an FA has field staff. • Fully compatible with CEAA. • Immediate implementation through terms/conditions, agreements and contracts is possible. • Proven to be effective on many projects. Many precedents exist. • Strengthens ability of the RA to enforce terms and conditions, and obtain quality unbiased information about the project. • Training and certification of inspectors is possible. 	<ul style="list-style-type: none"> • Proponents and industry will likely resist additional costs and controls to project development. • Use of environmental inspectors may not be appropriate or cost effective for small screenings. • Inspectors empowered to impose fines or sanctions will require support. Additional effort is required in defining impact thresholds or other levels that would trigger enforcement action. • Powers, roles and responsibilities of inspectors may be inconsistent across projects.



Kemess Mine Project

In the Kemess Mine project, federal and provincial authorities requested that the proponent develop a program outlining the staffing and qualification requirements, reporting relationships, scope of work and funding for construction supervision and monitoring, including the provision of:

- an independent peer review panel for the design and construction of the tailings facility to report directly to the proponent and a geotechnical subcommittee;
- an independent geotechnical inspector for the tailings facility construction;
- an independent inspector/supervisor during the construction of the transmission line;
- an independent environmental supervisor during road and load-out design and construction; and
- a liaison person on a needs basis to interact with First Nations in regard to, among other items, environmental monitoring.

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7.3.8 Expanded Use of Sanctions / Fines for Non-Compliance

All federal authorities have some ability to impose sanctions and fines for non-compliance with their legislation, however these powers may be too narrow to apply to the enforcement of follow-up activities. Therefore, this option involves the review of legislation by each federal authorities and changing the applicable regulations and legislation to provide for the expanded use of sanctions such as:

- licensee/approval suspension, amendment;
- issuance of verbal warnings/directions;
- issuance of stop-work orders, and/or
- ticketing/fines.

7.3.8.1 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none">• Expanded use of sanctions would provide incentive for implementation.• Potentially applicable to all projects at the discretion of the RA.• Fully compatible with CEAA.• Proven to be effective on many projects. Many precedents exist.	<ul style="list-style-type: none">• Changes to legislation/regulation is likely required for many federal authorities.• Enforcement is required to impose sanctions.• Proponents and industry will likely resist additional costs and controls to project development.

8. Evaluation Summary

This section highlights the key conclusions of the analysis in a generic fashion by rating each of the options and tools with respect to their potential for improving the manner in which follow-up is conducted. The following qualitative rating system was applied:

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High Potential (H)	<ul style="list-style-type: none"> • addresses multiple issues/problems; • is known to be effective; • can be implemented without changes to current legislation / regulations; • can be implemented quickly with minimal disruption to current practices/ programs; and • other advantages outweigh disadvantages.
Moderate Potential (M)	<ul style="list-style-type: none"> • addresses a selected issue/problem; • likely to be effective; • minor changes to the Act requires the introduction of new regulations or changes to existing regulations; • may set a precedent; • implementation requires additional research or longer timeframe; and • potentially costly to develop/implement.
Low Potential (L)	<ul style="list-style-type: none"> • addresses a selected issue/problem area and other alternatives are available to address the issue/problem; • not likely to be effective; • requires significant changes to the CEAA and other legislation; • implementation requires longer time frames; • may set a precedent; • would be disruptive to current practices/programs; • costly to develop/implement; and • other disadvantages outweigh the advantages.

Table 4 applies this rating system to each of the options/tools identified and evaluated in Sections 6 and 7. The rating system was applied both independently and in a plenary session of the Follow-up Subcommittee. Each member of the Subcommittee was asked rate each option/tool from their own departmental perspectives. In the plenary session, these individual ratings were shared among the Subcommittee members and areas where there was consensus and areas where disagreements existed were identified. Each options/tool was discussed in detail to clarify the reasons for any significant differences in the ratings among Subcommittee members and resolve differences in order to reach a consensus rating. Table 4 presents a summary of the departmental ratings expressed in terms of percent (%) and highlights the consensus rating for each option/tool. Based on the evaluation criteria and the plenary discussion, a rationale is provided that highlights the key reasons for the consensus rating.

Table 4. Rating Summary of Options/Tools

Option/Tool	Departmental Rating Summary					Consensus Rating	Rationale
	H	MH	M	ML	L		
	Improving Management and Clarifying Roles and Responsibilities						
1. Expansion of the Federal Co-ordination Regulations		14%	7%	14%	65%	L	<ul style="list-style-type: none">Only serves to address problem of co-ordination of follow-up activities among federal authorities. Other alternatives are available to improve coordination of follow-up activities.Effectiveness is uncertain, but likely to be low based on experience with implementation of current Federal Co-ordination Regulations. Effectiveness will likely depend upon the willingness and ability of federal authorities to comply.Requires regulatory changes.Regulatory changes would require a long timeframe to develop and implement. Work towards regulatory changes are not likely commence until after the completion of the five year review.
2. Development of Subsidiary Agreements under Federal-Provincial and Territorial Cooperative Agreement	14%	7%	14%	36%	29%	M-L	<ul style="list-style-type: none">Only serves to address problem of co-ordination of follow-up activities among jurisdictions. The scope of application of this option is limited to EAs that require a joint review.Effectiveness is uncertain, because of the limited experience with implementation of existing Cooperative Agreements.Negotiations between federal, provincial and territorial governments regarding harmonization will continue. Subsidiary agreements regarding follow-up remain a possibility.Negotiation of subsidiary or other cooperative agreements will require a long timeframe to develop and implement.
3. Use of Interdepartmental Co-ordinating Committees		56%	31%	13%		M-H	<ul style="list-style-type: none">Only serves to address problem of co-ordination of follow-up activities among federal authorities.Effectiveness is uncertain, but is likely dependent upon the commitment of federal authorities to participation in the committee process and resourcing for individual projects. However, good examples exist where these committees have been effective in improving coordination and communications throughout the EA process.No changes to legislation or regulations are required. Implementation is voluntary on a project-by-project basis. Minimal disruption to current practices and programs is anticipated.Potential increased efficiency in the EA process and increased access to decision-making for federal authorities are major advantages.

Table 4. Rating Summary of Options/Tools

Option/Tool	Departmental Rating Summary					Consensus Rating	Rationale
	H	MH	M	ML	L		
4. Use of Environmental/Liaison Committees	13%	6%	47%	28%	6%	M-L	<ul style="list-style-type: none"> • May serve to address problem of co-ordination of follow-up activities among federal authorities and among jurisdictions on a project specific basis. Not likely applicable to all EAs. • Effectiveness is uncertain, but is likely dependent upon the commitment of federal authorities and other stakeholders (e.g. project proponents) to participation in the committee process and resourcing for individual projects. • No changes to legislation or regulations are required. Implementation is voluntary on a project-by-project basis. Minimal disruption to current practices and programs is anticipated.
5. Compliance Monitoring of RA/FA Follow-up Activities	20%	25%	47%	8%		M-H	<ul style="list-style-type: none"> • Indirectly serves to address problems relating to inconsistent design and implementation of follow-up programs and provide an incentive for responsible authorities to conduct follow-up. • Likely to be effective. Centralized audit functions are used throughout the federal government, but have not been applied to the administration of the Act. Effectiveness will be dependent upon the technical capabilities of the RAs. • No changes to legislation or regulations are required. Increased role of the Agency in monitoring the compliance of individual departments may set a precedent.
Improving the Content of Follow-up Programs							
1. Amending the CEAA and/or developing Follow-up Regulations				100%		L	<ul style="list-style-type: none"> • Legislative changes or new regulations could assist in clarifying various interpretations of what is required under Section 38 of the Act, improve consistency in the design and implementation of follow-up and provide an incentive for federal authorities to conduct follow-up. Other alternatives are available to address follow-up related problems/issues. • Effectiveness is uncertain, but will likely depend upon the willingness and ability of federal authorities to comply. Flexibility for RAs in designing a follow-up program is desirable. • Significant changes to the Act may be required. • Legislative amendments and regulatory changes would require a long timeframe to develop and implement. Work towards such amendments or new regulations are not likely commence until after the completion of the five year review. A one to two year timeframe is anticipated. • Legislative amendments and new regulations are costly. Cost/benefit analysis would be required.

Table 4. Rating Summary of Options/Tools

Option/Tool	Departmental Rating Summary					Consensus Rating	Rationale
	H	MH	M	ML	L		
2. Agency Guidelines or Operational Policies	40%	20%	40%			H	<ul style="list-style-type: none"> Agency guidelines or operational policies could assist in clarifying various interpretations of what is required under Section 38 of the Act, improve consistency in the design and implementation of follow-up and provide an incentive for federal authorities to conduct follow-up. Agency guidelines and operational policies are known to be effective tools for providing guidance to federal authorities and project proponents and improving the content and consistency of EA documents. Similar benefits are likely with respect to follow-up. Guidelines and/or operational policies can be developed and implemented quickly without changes to legislation or regulations. Guidelines can be incorporated into a regulation, standard or code-of practice at a later date (if desired). These options are not foregone.
3. Departmental Guidelines	36%	36%	28%			M-H	<ul style="list-style-type: none"> Departmental guidelines would improve the content and consistency in the design and implementation of follow-up. Improvements in environmental assessment baseline studies and impact assessments are anticipated. Departmental guidelines are known to be effective tools for providing guidance to technical staff at federal authorities and project proponents and improving the content and consistency of EA documents. Similar benefits are likely with respect to follow-up. Guidelines and/or operational policies can be developed and implemented quickly without changes to legislation or regulations. An overall framework for follow-up and approach to guideline development may be required to ensure consistency across federal departments. Guidelines can be incorporated into a regulation, standard or code-of practice at a later date (if desired). These options are not foregone. Significant benefits are anticipated if guidelines are developed using a consensus based approach involving all stakeholders.
4. Development of Standards, Codes of Practice or Protocols	46%		43%	14%		M-H	<ul style="list-style-type: none"> Standards would improve the content and consistency in the design and implementation of follow-up. Standards and codes-of-practice are known to be effective tools for providing guidance to technical staff at federal authorities and project proponents. Similar benefits are anticipated with respect to follow-up, however these tools have not been applied to the administration of the Act. Therefore, effectiveness remains uncertain. Standard setting can occur without changes to legislation or regulations. They can be incorporated into legislation and regulation at a later date (if desired). These options are not foregone.

Table 4. Rating Summary of Options/Tools

Option/Tool	Departmental Rating Summary				Consensus Rating	Rationale
	H	MH	M	ML	L	
5. Follow-up Related Tools to Improve Practices/Procedures	64%	36%				<ul style="list-style-type: none"> Standard setting may be as costly to implement as legislative amendments and regulatory changes. Significant benefits are anticipated if standards are developed using a consensus based approach involving all stakeholders. A variety of follow-up related tools can be developed. They can serve to improve consistency in the design and implementation of follow-up, reduce financial and human resource constraints and assist in capturing, sharing and retaining knowledge gained from EAs. Effective tools can be developed with appropriate research and funding. However, effectiveness is not guaranteed but will depend upon the relevance and quality of the tool that is developed, and the commitment of federal authorities to training and its use. Follow-up related tools can be developed and implemented quickly without changes to current legislation or regulations. Costs will vary depending upon the specific tool, however, significant benefits (i.e. efficiency and cost-effectiveness) are anticipated by sharing responsibilities for product development and training. Cost recovery is also possible for some tools.
6. Improving Public Registries/ Federal Environmental Assessment Index	36%	36%	14%	14%	M-H	<ul style="list-style-type: none"> Improvements to public registries and the FEAI would assist in capturing, sharing and retaining knowledge gained from EAs. Effectiveness remains uncertain and will be dependent upon the scope of the improvements that are made and the commitment of federal authorities to using this tool. Improvements can be implemented quickly without changes to current legislation or regulations. This initiative has already been started. Significant benefits are anticipated in terms of increased consistency, efficiency and cost-effectiveness through increased standardization and training.
7. Development and Delivery of Training Programs	86%	14%				<ul style="list-style-type: none"> Training is an essential component of any strategy to improve follow-up. Proper training can help address the full range of issues/problems identified. Training is known to be effective when conducted on the basis of a sound needs analysis and program design. Training does not require changes to current legislation or regulations. Significant experience exists within the federal government in conducting training. Significant benefits are anticipated in terms of increased consistency, efficiency and cost-effectiveness of follow-up programs. Cost of training will depend upon the type of programs that are developed and how they are delivered. Cost recovery is possible.

Table 4. Rating Summary of Options/Tools

Option/Tool	Departmental Rating Summary					Consensus Rating	Rationale
	H	MH	M	ML	L		
Improving Permitting and Enforcement							
1. Inclusion of Follow-up Related Conditions in Relevant Authorizations, Licences, Permits and Approvals	7%	27%	39%	20%	7%	M	<ul style="list-style-type: none"> Improving terms and conditions may serve to improve compliance with follow-up commitments contained in EAs. Inclusion of terms and conditions of approval are known to be effective in improving compliance on the part of project proponents. Can be implemented immediately on all appropriate projects. A precedent exists. This measure is not costly to implement and significant benefits are anticipated in terms of improved communication and coordination among federal authorities, and improved enforceability.
2. Development of an 'Umbrella' Approval for Follow-up Programs			14%	20%	66%	L	<ul style="list-style-type: none"> Only serves to improve compliance with follow-up commitments contained in EAs. Other alternatives are available (e.g. contracts). A formal approval is likely to be effective. Effectiveness has been proven in many other jurisdictions, however it is dependent upon ability and willingness to enforce terms and conditions of approval. Changes to the CEAA and/or other legislation would be required. Significant changes in the architecture of the Act are likely. Legislative amendments and regulatory changes would require a long timeframe to develop and implement. Work towards such amendments or new regulations are not likely commence until after the completion of the five year review. A two to three year timeframe is anticipated. Legislative amendments and new regulations are costly. Cost/benefit analysis would be required. Significant disadvantages include: increased costs of enforcement, blurred rules and responsibilities and disruption to current programs and practices.
3. Expanded Use of Financial Assurances	8%	8%	38%	31%	15%	M	<ul style="list-style-type: none"> Serves to ensure compliance with follow-up commitments contained in EAs and addresses the lack of financial resources to conduct follow-up. Financial assurances are likely to be effective. Effectiveness has been proven in many other jurisdictions. Changes to the CEAA and/or other legislation may be required to empower some federal authorities. Legislative amendments and regulatory changes would require a long timeframe to develop and implement. Not applicable to all RAs or projects, as this is dependent on the type of trigger. Legislative amendments and new regulations are costly. Cost/benefit analysis would be required. Significant disadvantages to the federal government include: increased costs of administration and disruption to current programs and practices.

Table 4. Rating Summary of Options/Tools

Option/Tool	Departmental Rating Summary					Consensus Rating	Rationale
	H	MH	M	ML	L		
4. Agreements, Contracts between R/FAs, Project Proponents and Other Stakeholders	36%	28%	28%			M-H	<ul style="list-style-type: none"> Serves to ensure compliance with follow-up commitments contained in EAs and addresses the lack of financial resources to conduct follow-up. Likely to be effective in ensuring compliance and providing an incentive to proponents to conduct follow-up. Good examples exist where contracts and agreements have been effective. No changes to legislation or regulations are required. Implementation is voluntary on a project-by-project basis. Minimal disruption to current practices and programs is anticipated. Can be implemented immediately on all appropriate projects. Precedents exist. Cost of developing contracts and agreements will be project specific. Significant benefits are anticipated in terms of improved communication and coordination among federal authorities, and improved enforceability.
5. Staged Approvals and/or Progressive Funding	7%	7%	65%		21%	M	<ul style="list-style-type: none"> Serves to ensure compliance with follow-up commitments contained in EAs and addresses problems regarding international EAs. Likely to be effective in ensuring compliance and providing an incentive to proponents to conduct follow-up. Good examples exist where staged authorizations and progressive funding arrangements are used effectively within the federal government and in other jurisdictions. Changes to legislation may be required for some federal authorities. Implementation of progressive funding is voluntary on a project-by-project basis. Not applicable to all RAs or projects. Legislative amendments would require a long timeframe to develop and implement. Legislative amendments and the administration relating to staged approvals and progressive funding arrangements will be costly. Cost/benefit analysis would be required by individual departments.
6. Conducting Follow-up Evaluations of Projects	36%	29%	35%			M-H	<ul style="list-style-type: none"> Serves to ensure compliance with follow-up commitments contained in EAs and provides an incentive to proponents to conduct follow-up. This tool is the best mechanism to capture and retain knowledge gained from EAs. Effectiveness can vary depending upon the evaluation process, however they are likely to be effective. Good examples exist where follow-up evaluation have been successfully undertaken. A compliance evaluation framework has been developed and is being tested on a pilot scale. No changes to legislation required. Evaluations can be undertaken immediately on new projects. Costs will vary depending upon projects. Level of effort and costs can be tailored to the project.

Table 4. Rating Summary of Options/Tools

Option/Tool	Departmental Rating Summary					Consensus Rating	Rationale
	H	MH	M	ML	L		
7. Expanded Use of Environmental Inspectors		36%	21%	36%	7%	M	<ul style="list-style-type: none"> Serves to ensure compliance with follow-up commitments contained in EAs and provides an incentive to proponents to conduct follow-up. Effectiveness can vary depending upon the training and powers of the inspector, however, they are likely to be effective. Good examples exist where inspectors have been effective in ensuring that mitigation measures are effective. No changes to legislation required. Costs will vary depending upon the scale of the inspection program and the nature of the project. Opportunities exist for cost recovery.
8. Expanded Use of Sanctions / Fines for Non-Compliance	7%			21%	72%	L	<ul style="list-style-type: none"> Serves to ensure compliance with follow-up commitments contained in EAs and provides an incentive to proponents to conduct follow-up. Sanctions and fines are known to be effective but there may be a reluctance to apply them. Changes to CEAA and other legislation is likely. Legislative amendments would require a long timeframe to develop and implement. Legislative amendments will be costly. Cost/benefit analysis would be required by individual departments.

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A Discussion Paper**

9. Conclusions and Recommended Actions

9.1 Conclusions

Based on the evaluation of options/tools undertaken by the Follow-Up Subcommittee, Table 5 lists those options/tools that were deemed to have a high, high-moderate or moderate potential for improving follow-up.

Table 5. Recommended Options / Tools

Rating	Option / Tool
High Potential	<ul style="list-style-type: none">• Agency Guidelines or Operational Policies• Follow-up Related Tools to Improve Practices/Procedures• Developing and Delivery of Training Programs
High - Moderate Potential	<ul style="list-style-type: none">• Use of Interdepartmental Co-ordinating Committees• Compliance Monitoring of RA/FA Follow-up Activities• Departmental Guidelines• Standards, Codes of Practice or Protocols• Improving Public Registries / FEAI• Agreements, Contracts between RA/FAs, Project Proponents and Other Stakeholders• Conducting Follow-up Evaluations of Projects
Moderate Potential	<ul style="list-style-type: none">• Inclusion of Follow-up Related Conditions in Relevant Authorizations, Licenses, Permits and Approvals• Financial Assurances• Staged Approvals and /or Progressive Funding• Expanded Use of Environmental Inspectors

The options/tools that were considered to have only limited potential by the Follow-up Subcommittee (i.e., those rated low or low-moderate) for improving follow-up were those that involved:

- a) amendment of the Canadian Environmental Assessment Act or introducing new regulatory measures (i.e., developing follow-up regulations; development of an umbrella approval for follow-up programs);
- b) amendment of other existing legislation or regulations (i.e., expansion of the Federal Co-ordination Regulations, expanded use of sanctions/fines for non-compliance);
- c) development of subsidiary agreements under Federal-Provincial and Territorial Co-operative Agreements; and
- d) delegation of responsibilities for conducting follow-up to environmental / liaison committees.

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Although considered to have limited potential by the Follow-up Subcommittee, the development of subsidiary agreements under Federal-Provincial and Territorial Cooperative Agreements was considered a viable option by others (e.g., Agency regional staff and members of the Regional Environmental Assessment Committees).

The Follow-Up Subcommittee also concluded that:

- A combination of options/tools organized in a hierarchical framework is needed.
- Actions to improve follow-up need to be taken at a variety of levels and implemented by each federal authority and by the Agency. Any approach to improving following up must be implemented co-operatively with the involvement of all relevant federal departments and agencies.
- A pragmatic approach to improving follow-up is required that can be implemented within a reasonable timeframe, given human and financial resource constraints. The recommended approach must be cost-effective and result in minimal disruption to existing programs within federal departments.
- Not all options/tools are applicable or useful to all federal departments or agencies. Federal departments must be afforded the flexibility to tailor their activities and implement those options/tools that suit their diverse needs, priorities, human and financial resources.
- Mechanisms are required to ensure consistency on core issues and avoid duplication of effort across federal departments and agencies. To this end, the Follow-up Subcommittee concluded that the Canadian Environmental Assessment Agency has an important role to play in:
 - ⇒ developing a framework that will guide federal authorities and project proponents regarding follow-up; and
 - ⇒ promoting and co-ordinating the implementation of the recommended action plan.
- Improvements to follow-up need to be made in an incremental but continuous fashion. Within the context of the Five year review and other Agency initiatives, there are many opportunities to improve and institutionalize follow-up in a staged manner. Therefore, an approach is required that:
 - ⇒ is integrated with other activities related to the Five year review;
 - ⇒ can be implemented relatively quickly;
 - ⇒ can evolve over time; and
 - ⇒ includes a mechanism that can track and evaluate the success of federal departments and that assist in improving follow-up over time.

CEAA CONSULTATION WITH FEDERAL AUTHORITIES

CEAA Operational
Policy Statement(s)

Training / Communication

CEAA Follow-Up
Guide(s)

Training / Communication
Standards or Codes
of Practice

Improvements
to FEAI

Compliance Monitoring
Framework (CMF)
(Analysis of Follow-Up
Performance Indicators)

CEAA COORDINATION, ADVICE & GUIDANCE

Department Specific
Follow-Up Guides

- Project Specific
- Program Area / Sector
- Other

Training / Communication
Standards or Codes
of Practice

Application of Follow-Up
Component of
Customized CMF

Improvements
to
Public Registries

Follow-Up
"Tool Box"

- Agreements / Contracts
- Financial Assurance

Department Specific
Follow-Up Guides

- Project Specific
- Program Area / Sector
- Other

Training / Communication
Standards or Codes
of Practice

Application of Follow-Up
Component of
Customized CMF

Improvements
to
Public Registries

Follow-Up
"Tool Box"

- Inspectors
- Inter Departmental Coordination Committee
- Follow-up Evaluation of Projects

Department Specific
Follow-Up Guides

- Project Specific
- Program Area / Sector
- Other

Training / Communication
Standards or Codes
of Practice

Application of Follow-Up
Component of
Customized CMF

Improvements
to
Public Registries

Follow-Up
"Tool Box"

- Liaison Committee
- Follow-Up Terms & Conditions



Gartner
Lee

CONCEPTUAL FRAMEWORK FOR RECOMMENDED IMPROVEMENTS

Canadian Environmental Assessment
Agency

FIGURE

3

Project 98-469
(98-469-469F03 cdr)

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9.2 Recommended Actions

Based on the evaluation of options and the conclusions identified above, the Follow-Up Subcommittee developed a hierarchy of options/tools as depicted on Figure 3. Accordingly, an overall consistent approach to follow-up needs to be developed by the Agency in consultation with all relevant federal authorities in the form of an Operational Policy and Follow-up Guide. Within this framework, individual federal departments would develop their own follow-up related guidelines, guides and tools (as required) to improve practices and procedures and conduct compliance monitoring for their own follow-up activities using a 'compliance monitoring framework' developed by the Agency. The Agency would assist federal departments by playing a co-ordination role and by providing advice and guidance. Training and communications programs would be designed and delivered by the Agency and individual federal departments regarding their own initiatives (i.e., policies, guides, etc.). The Follow-up Subcommittee also envisaged that some of the guides developed by the Agency or individual federal departments could evolve into more formal standards or codes of practice in the future.

To this end, the specific recommendations of the Follow-up Subcommittee are:

1. The Canadian Environmental Assessment Agency should proceed immediately with the development of an Operational Policy regarding follow-up that:
 - defines the term 'follow-up' in the context of environmental assessment; and
 - clarifies the legal requirements under the Act regarding follow-up.
2. The Canadian Environmental Assessment Agency should proceed immediately with the development of a Follow-up Guide(s). The scope and content of the guide should be determined co-operatively and the document developed with the involvement of relevant federal authorities. At a minimum, the guide should identify:
 - the criteria to be applied by federal authorities in deciding on the need for a follow-up program on specific projects or on a program basis;
 - the basic or fundamental elements of a follow-up program that should be described within a screening report or comprehensive study;
 - the criteria to be applied by federal authorities in deciding on the need to establish an interdepartmental co-ordinating committee and their operating procedures and practices;
 - the criteria for determining when department-specific guides are warranted.

The Agency should investigate the need for other follow-up related guidelines or guides, including: the use and administration of financial assurances, negotiation and administration of agreements and contracts within the context of environmental assessment.

Options and Tools for Improving Follow-Up: A Discussion Paper

3. The Canadian Environmental Assessment Agency should continue to maintain the option of developing subsidiary agreements regarding follow-up as part of Federal-Provincial and Territorial Cooperative Agreements regarding environmental assessments.
4. All Federal departments that are involved in Environmental Assessment should identify those sectors, types of projects, monitoring activities or types of environmental effects where departmental guidelines or guides are desirable to improve practices and procedures. To promote the development of these guidelines and guides and to ensure their consistency across all federal departments, the Agency should undertake a process of consultation and agreement building with individual departments and other stakeholders (as required) on an appropriate and consistent frameworks or approaches for departmental guidelines regarding follow-up.
5. Federal departments should develop appropriate guides (as required) in accordance with the Agency's Operational Policy and Follow-up Guide. The objectives of such guidelines or guides would be to:
 - highlight the importance of follow-up activities in the context of EA;
 - consolidate information on applicable federal, provincial and other legislation, regulations and standards;
 - provide definitions for key terms;
 - offer a common and widely accepted reference point on information requirements for the design of various follow-up activities on projects that are subject to the Canadian Environmental Assessment Act.;
 - identify alternative approaches for data-gathering and analysis;
 - offer guidance regarding the implementation of follow-up on a project-specific vs. program basis;
 - recommend alternative structures and formats for reporting on follow-up programs; and
 - offer additional information relevant to the EA and follow-up programs on projects through the presentation of case studies.
6. All federal departments should also identify other tools that are required to improve follow-up practices and procedures (e.g., best practice manuals, forms checklists) with the assistance of the Agency.
7. The Agency should design and deliver appropriate mechanisms to facilitate information exchange (e.g., websites, practitioners workshops, conferences, etc.) among federal departments regarding follow-up guidelines, guides and other tools to improve practices and procedures.

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8. The Agency, in co-operation with all federal departments involved in EA, should proceed in refining the follow-up component of the 'compliance monitoring framework'. Pending the results of the current pilot project, the Agency should promote the application of this tool as a mechanism to track and evaluate the success of federal departments in implementing follow-up.
9. As part of ongoing activities related to the Five year review of the Act, the Agency should ensure that a standardized format and structure to the follow-up components of public registries is implemented and that the FEAI be expanded to include:
 - the decision taken by the RA regarding the need for a follow-up program and its rationale (i.e., based on the criteria developed in the Agency's follow-up guide);
 - the components of the proposed follow-up program, highlighting any special items or features;
 - the project officer(s) responsible for implementing follow-up; and
 - a listing of available follow-up related information such as follow-up agreements, contracts, monitoring reports, etc.
10. Training is an essential component of any strategy to improve follow-up. All federal authorities should ensure that appropriate training programs are designed and delivered that support their follow-up related initiatives. At a minimum, the Agency should design and deliver training and/or communications programs regarding:
 - the Operational Policy regarding follow-up to be developed by the Agency;
 - the content of the follow-up guide(s) to be developed by the Agency;
 - the implementation of the compliance monitoring framework for follow-up; and
 - the use of the FEAI by federal departments.

In consultation with the Agency, Federal departments should design and deliver training and/or communications programs to support their follow-up activities, particularly regarding the content of any follow-up related guidelines or guides to be developed. The Canadian Environmental Assessment Agency should take on a co-ordination role for training programs that involve multiple federal departments, provincial or territorial jurisdictions.

9.3 Preliminary Action Plan

The following table presents a preliminary action plan developed by the Follow-Up Subcommittee for each recommendation. The action plan assumes that the subcommittee will continue to act in an advisory capacity to the Agency and other Federal departments on issues relating to follow-up.

**Options and Tools for Improving Follow-Up:
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Table 6. Preliminary Action Plan

#	Lead Responsibility	Role of Subcommittee	Proposed Time Frame
1	CEAA	Advisory	Spring 99 - Fall 99
2	CEAA	Advisory	Fall 99 - Spring 2000
3	CEAA	None	Ongoing
4	CEAA / Subcommittee	Developmental	Fall 99 - Spring 2000
5	Individual Federal Departments	Advisory	Spring 2000 - Fall 2000
6	Individual Federal Departments	Advisory	Spring 2000 - Fall 2000
7	CEAA	Advisory	Ongoing
8	CEAA / Subcommittee	To be determined	Summer 1999 - Spring 2000
9	CEAA	Advisory	Summer 1999 - Spring 2000
10	CEAA	Advisory	Upon completion of deliverables

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Appendix A

Follow-Up Subcommittee Membership

Appendix A

Follow-Up Subcommittee Membership

Name	Position	Department Name
Chris Taylor	Senior Program Analyst, Program Management & Review Section	Atomic Energy Control Board (AECB)
Mr. Jim Lothrop	Senior Environmental Assessment Officer, Environmental Affairs, Programs & Divestiture	Transport Canada
Ms. Maria Ooi	Environmental Assessment Officer, Environmental Health Directorate	Health Canada
Mr. Scot Jennings	Implementation Officer	Atlantic Canada Opportunities Agency (ACOA)
Ms. Joanne St-Onge	Manager, Compliance & Monitoring, Legislative and Regulatory Affairs	Canadian Environment Assessment Agency (CEAA)
Mr. Gary McLean	Senior Advisor, Environmental Assessment Policy & Planning Branch	Environment Canada
Mr. Stéphane Greffard	Project Officer, Environmental Conservation, Natural Resources Branch	Canada Heritage/Parks Canada
Mr. Peter Croal	Environmental Specialist, Policy Branch	Canadian International Development Agency (CIDA)
Ms. Rennie Tupper	Senior Environmental Assessment Officer	Natural Resources Canada (NRCan)
Mr. Scott Gedak	Environmental Specialist Regulatory Development Operation Business Unit	National Energy Board (NEB)
Mr. Robert Renaud	Manager, Program Integrity and Secretariat, Programs and Services Branch	Industry Canada
Mr. Steve Burgess	Chief, Policy and Program Development, Habitat Management & Environmental Sciences Directorate	Department of Fisheries and Oceans (DFO)
Ms. Cara McCue	Environmental Policy Advisor, Policy and Projects	Department of Indian And Northern Affairs (DIAND)
Mr. John Brown	Environmental Analyst, Environmental Bureau	Agriculture & Agri-Food Canada
Ms. Mary-Ann Spicer	Manager, Environmental Evaluation & Regulations	Public Works & Government Services Canada (PWGSC)
Ms. Marie-France Thérien	Senior Project Assessment Analyst	Canadian Environmental Assessment Agency (CEAA)
Mr. Christopher Duschênes	Senior Officer, Environmental Assessment Lands and Trust Services	Indian and Northern Affairs
Ms. Diane McClymont-Peace	Senior Advisor, Policy and Programs	Department of Fisheries and Oceans (DFO)
Ms. Jean Blane	Senior Program Officer, Regional Liaison and Guidance Group	Canadian Environmental Assessment Agency (CEAA)

Appendix B

Follow-up in the Context of CEAA

Appendix B

Follow-up in the Context of CEEA

CEEA Requirements for Follow-Up

Definition	<ul style="list-style-type: none"> Follow-up program – A program for: <ul style="list-style-type: none"> a) verifying the accuracy of the EA of a project; and b) determining effectiveness of any measures taken to mitigate the adverse environmental effects of the project
EA Process <i>Section 14(c)</i>	<ul style="list-style-type: none"> The EA process includes, <u>where applicable</u>, the design and implementation of a follow-up program.
Comprehensive Studies, Panels, Mediation <i>Section 16(2)(c)</i>	<ul style="list-style-type: none"> ..every comprehensive study of a project and every mediation or assessment by a review panel shall include consideration of..the need for, and the requirements of any follow-up program in respect of the project.
Delegation <i>Section 17(1)</i>	<ul style="list-style-type: none"> An RA.. may delegate any part of the design and implementation of a follow-up program, but shall not delegate the duty to take a course of action pursuant to subsection 20(1) or 37(1) of the Act.
Mediation and Panel Reviews <i>Section 34(c)(i)</i>	<ul style="list-style-type: none"> A review panel shall, in accordance with any regulations made for the purpose and with its terms of reference .. prepare a report setting out the rationale, conclusions and recommendations of the panel relating to the EA of the project, including any mitigation measures and follow-up program.
Follow-Up Program Design and Implementation <i>Section 38(1)</i>	<ul style="list-style-type: none"> Where an RA takes a course of action pursuant to paragraph 20(1)(a) or 37(1)(a) of the Act, it shall, in accordance with any regulations made for that purpose, design any follow-up program that it considers appropriate for the project and arrange for the implementation of that program.
Public Notice <i>Section 38(2)</i>	<ul style="list-style-type: none"> An RA..shall, in accordance with any regulations made for that purpose, advise the public of: <ul style="list-style-type: none"> a) its course of action in relation to the project b) any mitigation measures to be implemented for the adverse environmental effects of the project c) the extent to which the recommendations set out in any report submitted by a mediator or a review panel have been adopted and the reasons for not having adopted any of those recommendations d) any follow-up program designed for the project e) any results of any follow-up program
Minister <i>Section 53(1)</i>	<ul style="list-style-type: none"> Where the Minister has referred a project to a mediation or review panel pursuant to subsection 46(1), 47(1) or 48(1) or (2)... the Minister shall, in accordance with any regulations made for that purpose, design or approve any follow-up program that the Minister considers appropriate for the project and arrange for the implementation of that program.
Public Notice <i>Section 53(2)</i>	<ul style="list-style-type: none"> Following the receipt of the report of the mediator or review panel in respect of the assessment of the environmental effects of the project .. the Minister shall, in accordance with any regulations made for that purpose, advise the public of: <ul style="list-style-type: none"> d) any follow-up program that is designed or approved for the project.. e) any results of any follow-up program

<p>Access to Information Public Registry Section 55(2)</p>	<ul style="list-style-type: none"> • The public registry in respect of a project shall be maintained: <ul style="list-style-type: none"> a) by the RA from the commencement of the EA until any follow-up program in respect of the project is completed
<p>Contents of Public Registry Section 55(3)</p>	<ul style="list-style-type: none"> • ..a public registry shall contain all records produced, collected, or submitted with respect to the EA of the project, including: <ul style="list-style-type: none"> d) any records produced as the results of the implementation of any follow-up program f) any documents requiring mitigation measures to be implemented
<p>Regulations Section 59</p>	<ul style="list-style-type: none"> • The Governor in Council may make regulations: <ul style="list-style-type: none"> a) respecting the procedures and requirements of, and the time periods relating to environmental assessment and follow-up programs... h) respecting the dissemination by RAs of information relating to projects and the EA of projects and the establishment, maintenance and operation of a public registry .. j) respecting the manner of conducting assessments of the environmental effects of, and follow-up programs for projects for which a Crown corporation.. exercise a power or performs a duty or function .. k) respecting the manner of conducting assessments of the environmental effects of, and follow-up programs for projects for which .. any harbour commission .. exercises a power or performs a duty or function .. i) respecting the manner of conducting any assessment of the environmental effects of, and follow-up programs for a project for which a person or body receives financial assistance provided by a federal authority for the purpose of enabling the project to be carried out in whole or in part on a reserve that is set apart for the use and benefit of a band and that is subject to the Indian Act, and respecting any action to be taken in respect of that project during the EA process m) prescribing anything that, by this Act, is to be prescribed; and n) generally, for carrying out the purposes and provisions of this Act.

Appendix C

Glossary of Terms

Appendix C

Glossary of Terms

Agency	means the Canadian Environmental Assessment Agency established by section 61.
Environmental Effect	means, in respect of a project: <ul style="list-style-type: none">a) any change that the project may cause in the environment, including any effect of any such change on health and socio-economic conditions on physical and cultural heritage, on the current use of lands and resources for traditional purposes by aboriginal persons, or on any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, andb) any change to the project that may be caused by the environment, whether any such change occurs within or outside Canada.
Minister	means Minister of the Environment.
Proponent	in respect of a project, means the person, body, federal authority or government that proposes the project.
Responsible Authority	in relation to a project, means the federal authority that is required pursuant to subsection 11(1) to ensure that an environmental assessment of the project is conducted.
Jurisdiction	includes: <ul style="list-style-type: none">a) a federal authority;b) the government of a province;c) any other agency or body established pursuant to an Act of Parliament or the legislature of a province and having powers, duties or functions in relation to an assessment of the environmental effects of a project;d) any body established pursuant to a land claims agreement referred to in section 35 of the Constitution Act, 1982 and having powers, duties or functions in relation to an assessment of the environmental effects of a project;e) a government of a foreign state or of a subdivision of a foreign state, or any institution of such a government; andf) an international organization of states or any institution of such an organization.
Public Registry	<p>Pursuant to section 55 of the Act, a registry established by a Responsible Authority for screenings and comprehensive studies, and by the Agency for mediations and panel reviews. The public registry consists of:</p> <ul style="list-style-type: none">• a listing of all the environmental assessments currently being conducted by or for federal departments or agencies;• a listing of the available documents relating to each environmental assessment;• a system that allows the public to locate and order these documents; and• a system that provides requested documents to the public.
Panel	Persons appointed by the Minister of the Environment pursuant to section 33 of the Act to conduct an assessment of a proposed project.
Scoping	An exercise of identifying the environmental and related issues that will be examined in an environmental assessment.